PHILADELPHIA MEDICAL TIMES.

CONTENTS.

CLINICAL LECTURES:
Repeated Intestinal Hemorrhages and Periostitis as Complications of Typhoid Fever. By Prof. J. M. DaCosta, M.D. ..... 513
The Causes and Significance of Hemorrhage from the Genital Canal. By E. E. Montgomery, M.D. ..... 517
TRANSLATIONS:
Phosphorus in Rickets—Epilepsy Treated by Hot Iron—Artificial Repression of the Menses in Chlorosis ..... 519
Candahol as a Local Anæsthetic—Urethrectomy—Vertigo in Smokers ..... 520
NOTES OF HOSPITAL PRACTICE:
Jefferson Medical College Hospital: Excision of Four Ribs for Empyema ..... 521
University Hospital: Concussion of the Brain; Stone in the Bladder—Medico-Chirurgical College: Stenosis of the Nasal Duct; Inversion of the Lower Lids—Orthopædic Hospital: Amputation of Forearm ..... 522
Chorea from Defect in Vision; Migraine; Epilepsy; A Good Tonic—Jefferson College: Lacerated Perineum; When Not to Give Milk—Wills' Eye Hospital: External Strabismus from a Dog's Bite ..... 523
Philadelphia Hospital: Skin Grafting; Dangers of the Hypodermic Needle; Curvature of the Spine; Bichloride for Erysipelas—Surgical Clinic of the Medico-Chirurgical Hospital: Section of Superior Maxillary Nerve at Base of Skull ..... 524
EDITORIALS:
The Philadelphia Medical Times ..... 525
A Good Work ..... 526
AMERICAN MEDICAL ASSOCIATION:
Section of Dietetics: Report of the Special Committee ..... 527
Report of Sub-Committee on Infant-Feeding ..... 528
A Symposium on Infant-Feeding ..... 530
Section of Diseases of Children: Professor Earle's Paper ..... 536
The Infant Food Problem ..... 537
LONDON LETTER ..... 541
REVIEWS AND BOOK NOTICES:
Atlas of Venereal and Skin Diseases. By Prince A. Morrow, A.M., M.D. ..... 545
A Manual of Diseases of the Nervous System. By W. R. Gowers, M.D., F.R.C.P., etc. ..... 545
LETTERS TO THE EDITOR:
Diagnosis and Treatment Wanted ..... 545
MISCELLANEOUS:
Suggested Medical Reciprocity with the United States ..... 546
Notes from the Baltimore Clinics—Pneumonia in Children ..... 547
Official List of Changes of Stations in the U. S. Navy ..... 547
The Dynamograph ..... 548
NOTES AND ITEMS:
Advertising Pages v, et seq.

No. 534. JUNE 1, 1888. VOL. XVIII

## CLINICAL LECTURE

### OF PROF. J. M. DaCOSTA, M.D.

At the Pennsylvania Hospital, Phila.

*REPEATED INTESTINAL HEMORRHAGES AND PERIOSTITIS AS COMPLICATIONS OF TYPHOID FEVER.*

GENTLEMEN: This man has been brought into the amphitheatre in order to show you the success of the treatment; and also for the purpose of showing you a new feature which has recently developed; since you last saw him. His name is Val. F., he is 35 years of age, and was admitted a month ago, with symptoms indicating a serious attack of typhoid fever. When he was first brought before you two weeks ago he was suffering with intestinal hemorrhages. I gave him fluid extract of ergot in doses of half a drachm every two hours, with opium suppositories in order to check peristaltic movements of the bowels. He also had his diet carefully regulated, the amount of milk was reduced, and he was sustained principally with beef tea. As the hemorrhages were soon stopped, the ergot was discontinued and we substituted for it a mineral acid, (acid sulphuric dilute) ♏x every three hours. Stimulants also were given, in small doses frequently repeated, during his period of greatest depression, when the axillary temperature fell to 97°; but since he had reacted we gave the stimulant (six ounces daily) in milk, in larger dose, but less often.

Under this treatment he did very well for over a week, when a new and somewhat rare feature appeared; he developed a periostitis over the left tibia, at the middle of its interior surface, the spot of swelling being about three inches in length by one and one-half inches broad; it was very tender to the touch. Under the influence of iodine applications, this swelling has gone to a very marked extent. Nowhere else has there been a periostitis. Besides the local application, we gave him internally, Lugol's solution, one drop every four hours. We would like to have given him more, but his stomach would not bear it; in fact even this dose had to be suspended after a day or two.

You will ask, is this complication a frequent one? I have already said that it is a very rare occurrence, but in this connection I want to put you on the look out for this complication after typhoid fever. Not only may you have periostitis of various bones, but the larynx may be invaded, a perichondritis may occur, followed by destruction of some of the cartilages. When periostitis occurs in one of the long bones, it generally terminates in recovery, but

it may leave a permanent local thickening, making a sort of node.

This periostitis of typhoid fever never occurs during the height of the disease, but only as it draws near its end, that is, more towards convalescence. Indeed, it sometimes appears more as a sequel than as one of the manifestations of the acute malady. Here it happened as a complication of a long protracted case owing, perhaps, chiefly to the vitiated condition of the blood, caused by the hemorrhages and other complications.

The case is now being treated by quinine and stimulants. I would like to have given him the solution of iodine a little longer but he is unable to take it. The amount of stimulant will be gradually reduced as soon as he can bear it; he is doing quite well at present and I have no hesitation in saying that I think that he will get well.

[The patient was taken back to the ward and during the afternoon had a severe intestinal hemorrhage; in three evacuations from the bowels, the nurse reported that he discharged nearly two quarts of blood. He appeared to be moribund, in collapse, with a temperature of 97°; face cold and forehead covered with perspiration, pulse almost imperceptible, but the application of heat to the extremities, with stimulants each half hour, and the administration of ergot (every three hours) caused a reaction, and he gradually revived. There were no more hemorrhages, and the patient became finally convalescent.

REP.]

*Case II.—Repeated attacks of Hemiplegia due to Cerebral Thrombosis.*—The patient just brought in is a sailor, 30 years of age, who was admitted on the 13th of this month into the men's medical ward, with right hemiplegia. The history as obtained from him was, that he had been in good health until four days before admission, when as he was rising from a chair he suddenly and without any premonitory symptoms lost all power in his right leg and arm and fell to the ground. He did not, however, lose consciousness. In the course of a few hours he regained power sufficiently to walk and to move the arm, though weakness continued for several days. He did not have headache nor any cerebral symptoms apparently, but he did have pain in the abdominal region whenever he moved his body. On the morning of the day of admission into the hospital, as he was getting out of his bunk, the right leg and arm again became suddenly paralyzed. Like the preceding one, this attack was not accompanied by loss of consciousness. When he was seen shortly after coming in he was found to be rather stupid and dull; but we cannot lay much stress upon this because he afterwards said that he was drowsy and stupid before the attack, and probably it is his normal condition. There was found complete motor paralysis of the right leg, with loss of power in the arm muscles; the grasp of the right hand was weak, and he could only with difficulty move the arm upon the bed. His face was not paralyzed, and there was no impairment of sensation anywhere. The paralyzed muscles responded well to both galvanic and faradic currents. The patella reflex of left side was normal, while in the right leg it was much increased. The ankle-clonus was detected. Temperature and respiration were not increased; the pulse was weak, not accelerated; the pupils were equal and responded to the light; the tongue was coated, bowels constipated. His urine was acid in reaction, of specific gravity 1015, and free from albumen and sugar.

To this history I will merely add, that since his admission he has been rational, but is disposed to drowsiness and sleeps most of the time. He has had no headache, and he still complains of pains in his abdomen upon moving his body or turning over in bed.

The appearance of the patient as he lies in bed is that of health; he is well nourished and has an intelligent face. Upon his making attempts at motion of his body you notice the immobility of the right lower extremity, and the impaired movements of the arm; his grasp is still feeble. Upon examination of his heart, I find a feeble first sound, corresponding with a feeble pulse, but there are no endocardial murmurs. There is no evidence of atheroma of the arterial system, no impairment of the special senses or disorder of the mental faculties, and, as you have heard, no evidence of kidney disorder. What

then is the nature and seat of the lesion or lesions producing these marked symptoms?

In considering the nature of this case several causes might be suggested. Coming on suddenly as a stroke of paralysis, apoplexy would present itself to your mind; but this explanation is rendered improbable by the right hemiplegia without loss of consciousness; by the transitory character of the paralysis; by the absence of mental symptoms; and by want of evidence of any disease of the walls of the arteries. There is an entire want of any history of a predisposing cause (such as profound emotion); premonitory symptoms also were absent. Let me add further that no elevation of temperature has been noted since he came under our care.

The character of the paralysis, its sudden onset while in a condition of apparent health, with preservation of the intelligence, and with rapid return of the power in the affected limbs, would suggest embolism of some branch or branches of the left middle cerebral artery. The objection to this view is that there is no evidence of disease of the heart to contribute the vegetations torn off from the valves, which form emboli when carried into the smaller arteries.

The opinion that I have formed of this case is that the process is a local one in the brain, and is due to coagulation occurring within the vessels, owing to weakness of the circulation. The feeble first sound of the heart, the poor pulse, with possibly too little to eat upon shipboard, have favored a slowing of the circulation which would directly lead to local coagulation of blood within the walls of the vessels.

*Case III.—Gastric Ulcer with repeated attacks of Hæmatemesis.*—The next case I think will interest you therapeutically. His name is H. C., a Frenchman by birth, about 36 years of age. He gives a long history of gastric disorder; in fact, I find that he was under treatment in this hospital seven years ago, when he had hemorrhages from the stomach. He has not only an old history of dyspepsia, but it seems that this complaint—if we can use the word complaint as applied to what is often merely an aggregation of individual symptoms—is hereditary in his family. His mother suffered for many years with it, and finally died with gastric disorder. The patient himself began to be dyspeptic when about fifteen years of age. He then, it seems, had a severe attack, from which he recovered, and did not suffer again from it until shortly before the date of his first admission. At that time, after a few days of pain and dyspepsia, he had an attack of vomiting of blood, and in his intestinal discharges was a considerable quantity of coffee-colored blood; there was evidently a gastric hemorrhage. Chilly sensations, prostration and gastric tenderness, accompanied this seizure, in which he lost a large quantity of blood, both by vomit and stool. He estimates that he lost nearly four quarts of blood at this time. When he came here the next day, he was very anemic; his liver was slightly enlarged. There was no albumen in the urine. There was a systolic basic murmur in the heart. Examination of the lungs revealed a slight impairment of the percussion note at the left apex, but without râles or other evidences of congestion. The chief difficulty was with his digestive organs. No tumor was discovered in the abdomen; but a spot of tenderness above and to the right of the umbilicus was detected. It was found that he had been out of work and nearly starved, and had been shoveling snow on the day before the hemorrhage occurred. He rapidly recovered, and returned to France, where he was well for about a month or six weeks, when he had another attack of hæmatemesis, in which he lost about two pints of blood, according to his statement. Following this, he had constant indigestion, with flatulence and pain in the stomach. About once a month he had attacks of vomiting, and would often vomit blood at these times. Three years ago the symptoms became more marked, vomiting increased in frequency, and he had violent epigastric pain, and he often vomited blood. Treatment being of no avail, he decided to return here, in the hope of improvement. He reached this city November 2, and during the time up to the date of his admission, December 17, he was

able to work only two days. The pain and vomiting were almost constant, and he emaciated rapidly. He also had a pain in his back, in the dorsal region of the spine.

When he was admitted he was very anemic and very emaciated; he was writhing with pain in his abdomen, radiating from a center just above the umbilicus. He vomited a large quantity of watery fluid, covered with whitish, greasy froth. After he came in, this was followed by vomiting of blood, in small hemorrhages two or three times daily for a week after his admission. No albumen was ever found in the urine. The blood that was vomited was at first dark-red, afterwards it was like coffee-grounds.

His treatment was symptomatic; he was put in bed upon a strict milk diet, and a pill of oxide of silver (gr. $\frac{1}{4}$) and of opium (gr. $\frac{1}{4}$) was given four times a day. His bowels were kept open by pills of belladonna, nux vomica and compound extract of colocynth, not given oftener than was strictly necessary.

Now, gentlemen, this man was immensely benefitted by the treatment; indeed, had you seen him when he came in, you would not now recognize him as the same man.

He is still slightly anemic, but not to be compared with the condition we found him in when he was admitted. His tongue is pale and clean, as it has been throughout; it is less anemic-looking than upon his admission. He says he is hungry all the time. We have allowed him, in addition to his milk-diet, soft-boiled eggs, and milk toast. The milk did not constipate; his bowels are regular. At first he had a great deal of pain, and everything he took into his stomach gave pain and caused vomiting, but it is no longer the case: there is no more vomiting. There is still some tenderness in the epigastric region, localized in a spot a little to the right of the median line, above the umbilicus. The pain in his back, at a point corresponding to the epigastric pain, to which he called our attention previously, has disappeared. As regards the viscera: the liver dulness is normal; the splenic dulness barely extends to the margin of the ribs. There is no disease of spleen or liver, nor has he ever given any history of malarial attacks, which, looked upon as possible causes of hemorrhages from the stomach, are important to determine. The heart-sounds are rather peculiar; the first is quite dull, short and indistinct, the second is more marked. The heart is evidently flabby. There is a faint systolic base murmur to the left of the sternum, due to the state of the blood.

What has been the matter with this man? I am sure that you recognize this case as one of gastric ulceration. It is a typical case. When you take into account his age—for he is still a youngish man—the long history of dyspepsia, with pain after eating, frequent vomiting and repeated gastric hemorrhages and local tenderness upon pressure, the case is very clear, especially when to this you add the negative evidence of the absence of any tumor or induration. Add to this the marked anemia partly due to the hemorrhages and partly independent of them; when you take all this into account, it seems to me impossible to come to any other conclusion than that of gastric ulcer. Certain it is that there is nothing in the liver, spleen or stomach which would account for the hemorrhage on any other ground. The pain increased upon taking food, the repeated hemorrhages and emaciation are in favor of this view; but the main point is the effect of the treatment, which I confess is better than I expected upon beginning it. It has been a remarkable success. Under a rigid diet, with strict attention to remaining at rest in a recumbent posture, which was here most strenuously enforced; keeping the bowels at rest with small doses of opium, combined with the local effects of the salts of silver, the results have been remarkable. The man is being cured, and I think there is every reason to believe that he will leave the hospital a well man.

But I think that this was not the first ulcer, although the notes are not conclusive upon this point. If he had an ulcer when he was here before, I think it possible that he may have another ulcer after leaving the hospital. Shall we now increase this man's diet? I would do so only with great care. I

should be inclined to try some underdone meat finely chopped up, with five grains of pepsin, at each time. Soft milk-toast might be given sparingly.

The silver has been kept up for three weeks. We must look out that we do not overdo the matter; you know the salts of silver may cause the skin to turn blue, although the oxide is less likely to do so than the nitrate. When administering these salts you should examine the mouth, for the first sign of saturation is seen in a blue line upon the gums. We do not find it here and are perfectly safe in continuing the remedy.

The only thing now remaining to be done is to give iron for the anemia, but it must be given so as not to irritate the stomach. Let him take;

℞ Ferri et ammonii citratis...gr. v
Glycerini.....℥ xl
Aqua.....℥ xv M.

for each dose, well diluted with water, two hours after his meals, twice a day.

## THE CAUSES AND SIGNIFICANCE OF HEMORRHAGE FROM THE GENITAL CANAL.

A Clinical Lecture delivered at the Medico-Chirurgical Hospital, April 3, 1888.

BY E. E. MONTGOMERY, M.D.,

Professor of Didactic and Clinical Gynecology, Obstetrician to the Philadelphia Hospital, and Vice-President of the American Association of Obstetricians and Gynecologists.

(Reported for the PHILADELPHIA MEDICAL TIMES.)

GENTLEMEN.—I bring before you a patient with the following history: Mrs. P., aged 32; has had five pregnancies, three at full term, with four children, and two miscarriages; her oldest child is aged 11 years. The last delivery was the twin pregnancy, and occurred four years ago. She has not felt well since her first pregnancy, during which she miscarried. From that period she has suffered with pain in back, uterus and over the bladder, the latter especially during micturition. She has frequent attacks of severe headache and nausea. During her whole menstrual life the flow has been quite free, lasting generally about a week; but for the last year this flow has been greatly increased, amounting at times to a hemorrhage, and occurring every three weeks.

This symptom—hemorrhage—is one to which you will frequently have your attention called in the treatment of diseases of the female genital tract, and is one whose importance you can not too highly estimate. The significance of hemorrhage varies greatly according to its relation to the menstrual flow and the period of life at which it occurs. Hemorrhage occurring near or after the climacteric is especially significant, and demands a most careful examination as to its cause. It may begin several years after the cessation of the menstrual flow, as a slight, bloody discharge, occurring at irregular intervals, and subsequently becoming continuous. The patient may or may not suffer from severe pain. She soon presents a pale waxy or yellowish appearance, and there is progressive emaciation. With such a picture, a vaginal examination reveals the cervix excavated, ragged, or presenting an extensive growth, filling up the vagina, readily broken down by the slightest pressure, and bleeding freely. This condition you readily recognize as malignant disease. While it is true that malignant disease most frequently makes its appearance at or near the climacteric, it does occur at any time after the twentieth year. Not every discharge of blood following the menopause is indicative of cancer. Women of intemperate habits or of a gouty tendency, who live high, are subject to attacks of vaginitis, in which hemorrhage or bloody discharge may take place from the enlarged and inflamed vaginal papillæ. The slightest quantity of bloody discharge is sufficient to awaken the suspicion in her mind that malignant disease is developing. The restriction of the diet and the cessation of the use of alcohol is sufficient, unaided, to bring about a cure. It should not be forgotten that hemorrhage from the uterus may result from engorgement of the portal circulation from liver or heart disease. Such cases demonstrate the necessity of being able to see through other glasses than those of the mere specialist. Local treatment would be of no avail.

Not unfrequently after riding, walking,

or coition, the patient will notice a slight show. She visits the physician in great trepidation fearing that some serious disorder is present; an examination by speculum discloses a uterus which presents no abnormal physical signs. The physician, possibly after repeated examinations, continues unable to ascertain the cause of the discharge and loses the confidence of his patient. The difficulty has been that he directed his attention to the uterus when the bleeding has arisen from papillæ, enlarged and abraded, in the region of the vestibule and orifice of the urethra.

During the period of active menstrual life, hemorrhage in the form of either menorrhagia or metrorrhagia occurs most frequently as the result of the presence of interstitial or submucous myomata. The flow is likely to be at times very severe, amounting to a hemorrhage. The patient may become exsanguinated and her life endangered by it. The flow is very free, increased by locomotion and may continue for a length of time. It is likely to be accompanied by expulsive pains or cramps arising from the efforts upon the part of the uterus to extrude the growth. The flow may arise also from endometritis of that form in which the papillæ have become enlarged, known as villous degeneration of the endometrium. Local congestions of the endometrium and resulting hemorrhage may take place from a mass of cellulitis in one or other broad ligament, interfering with the venous circulation and thus producing a local or partial endometritis.

A frequent cause of hemorrhage, as in that of the case before us, is *laceration of the cervix*. When the laceration is extensive and bilateral, the heavy uterus resting upon the vagina leads to wide eversion of the lips, the posterior being turned backward into the posterior fornix, the anterior forward in the axis of the vagina. The fissures become filled up with tissue in which the fibrous element predominates, and the whole surface of the cervix covered with granulations. These are injured with the movements of the body, and during coition oft times give rise to severe hemorrhage. The tear also has an influence in producing hemorrhage from the body of the organ. Its occurrence prevents the completion of the process of involution so that the uterus remains larger than normal; it favors the development of endometritis to a greater or less extent, and of the chronic catarrh and chronic metritis which are so frequently accompaniments of laceration. The catarrhal mucous membrane becomes swollen, loses its epithelium, the papillæ become enlarged, the capillaries dilated, and increased and prolonged menstrual flow becomes a marked symptom. At times, this condition is so bad that the patient suffers almost constantly from a bloody discharge. This chain of development very aptly describes the progress of the disease in the patient I have just had before you. The immediate performance of trachelorraphy in such a condition would not be followed with satisfactory results. The operation must be preceded by treatment directed to the relief of the diseased lining membrane.

Again, hemorrhage, in the form of menorrhagia, may occur, although most careful examination reveals no disease of uterus or vagina. It is usually preceded with pain in one or both iliac regions. This pain in many cases continues during the intervals of menstruation and completely subsides while the flow continues. In these cases a careful examination discloses chronic disease of the ovaries; one or both organs, more frequently the left, will be found enlarged, prolapsed and exceedingly tender. I can best illustrate the condition by relating the history of a case that has recently been under my care. Mrs. L., aged twenty-six years, mother of one child, has been suffering since its birth with pain in either iliac region. This pain was greatly aggravated just prior to the menstrual periods. The flow was very free, lasting ten days to two weeks. As a result of the prolonged distress, her mental condition became bad, so that she was in fear of some impending danger, whenever she was alone. This became so aggravated within the last six months before entering my private hospital, that she would not have her attendant out of her sight day or night. She was despondent, nervous, regurgitating her food and becoming rapidly emaciated.

The uterus was retroverted, ovaries prolapsed, enlarged and bound down by adhesions in Douglas's pouch. Pressure in the posterior vaginal fornix gave rise to agonizing pain, a pain similar to what she experienced during intercourse.

Local applications, counter-irritation, vaginal tampons, rest, change of scene, and constitutional treatment had been tried without avail. After over a year of this treatment, I succeeded in procuring her consent and that of her family to an operation for the removal of her appendages. This was done at my private hospital, Dec. 29, 1887. The subsequent result has been all that the most sanguine could have wished. The patient from being a helpless, querulous woman, a source of unhappiness to herself and others, is now well, able to take pleasure in lightening the burdens of others. The reflex phenomena are exceedingly frequent in this form of trouble. Thus, in some, the ovarian pain is not near so severe as the pain felt in the corresponding mamma. Young girls, with the advent of menstruation, are frequently the victims of menorrhagia caused by ovarian hyperæmia. This, under judicious care, may be overcome, or it passes into chronic or cystic disease, from which the patient is not relieved until the organs themselves are sacrificed.

By these remarks upon the discharge of blood from the genital tract, I have endeavored to impress you with the importance of this symptom, and the need of the greatest care in obtaining a correct idea of its cause, before you are ready to enter upon a course of treatment.

## TRANSLATIONS.

PHOSPHORUS IN RICKETS.—Comby details the results of the above treatment in forty cases, ranging in age from ten months to three years. The vehicle employed was cod liver oil, to which was added phosphorus to the amount of ten centigrammes per litre. From one to four teaspoonfuls of this were given daily. The duration of the treatment was from three to twelve months. Only well-marked cases were submitted to this treatment.

In general, the drug was well supported; sometimes it had to be discontinued for some days. Diarrhœa was observed in two or three cases, but he is not sure that the phosphorus caused it. No other accidents occurred, except such as are attributable to the cod liver oil.

The method has not proved dangerous, and Schwetchen's mortality of 19 per cent. cannot in justice be attributed to the phosphorus. Wishing to compare the old treatment by salt baths with the new, he has observed forty cases treated during three months by salt baths. Some children took also pure cod liver oil, others combined it with phosphorus. The results of the second series were no mortality, two complete cures, thirty-four much improved, and two stationary. These statistics serve to established the superiority of salt baths over phosphorus. Indeed the reputation which phosphorus has obtained is due to its employment in those mild cases where deformities have not taken place, and which tend to get well under proper hygienic treatment. In severe cases where all remedies fail, and irremediable deformities have taken place phosphorus is powerless to relieve. He concludes therefore, that the specific treatment of rickets is not an advance, since it is shown to be inferior to the traditional treatment of rickets. It is not an infectious or toxic disease, and therefore cannot have a specific *remedy*, and being a result of a profound disturbance of nutrition, must be met by prophylactic and hygienic measures. —*Revue de Thérapeutiq.*

EPILEPSY TREATED BY HOT IRON.—M. Fere presents a patient in whom, as well as in seven others, he had caused a marked diminution of spasms by the repeated application of the hot iron. These patients all present a certain degree of hemiplegia, due to a cerebral affection which had preceded the convulsive manifestations. —*Ibid.*

ARTIFICIAL REPRESSION OF THE MENSES IN CHLOROSIS.—Loewenthal, of Lausanne, records twenty-three cases in which the artificial repression of the menses has been very advantageous in this disease. The method employed

consisted in injections of warm water of about 49°, with absolute rest in bed. In some cases iced water was employed in preference to warm. Eighteen cases were chlorotic, and *all* were cured rapidly without other treatment than from three to five menstrual suppressions. Five were grave cases of hysteria, one of whom showed marked improvement, while three other cases were convalescent from exhausting illness, and in them the convalescence was much shortened. No bad effects were noticed. —*Revue de Thérapeutiq.*

CANDAHOL AS A LOCAL ANÆSTHETIC.—Dr. Phouchkine recommends candahol, a hydrocarbon distilled from the American naphtha, as a local anæsthetic. It is a transparent liquid insoluble in water or alcohol, and produces complete anæsthesia in 60 seconds. It is available for the removal of ingrowing nails, in whitlow, the enucleation of cysts. Another advantage of candahol is its moderate price.

URETHRECTOMY.—Resection of a portion of the urethra, followed by reunion of the divided ends, is a fine operation, for which the indications are found in contractions with fibrous induration, peri-urethral, surrounding the urethra like a ring, with a hard perineal mass, etc. Of nine cases operated upon by POUCET (of Lyons) none died, nor did any grave accident ensue. In three cases he obtained complete union by first intention. Many months afterwards, the result was found to be perfect; the perineum showed no trace of induration; a No. 20 bougie passed easily. In the other six cases, the union was by granulation, and they remained in the hospital many weeks. The definite result of this operation is superior to that of external urethrotomy; especially when union by first intention is obtained. The calibre of the canal is maintained, and months after, the site of the stricture can scarcely be detected.

When the union of the divided sections of the canal has not been possible, a new channel has been formed by granulation. The cure then demands many weeks, and the daily use of the catheter is necessary to preserve the patency of the canal.

In both classes the urethra performs its functions properly; coition and micturition being normal. —*Ibid.*

VERTIGO IN SMOKERS.—DeCaisne says, that in 63 subjects, from 29 to 66 years of age, he had observed that forty-nine were between the ages of 50 to 66 years. More than half presented digestive troubles with alternation of constipation and diarrhœa, some dyspepsia, an increased urinary secretion, more or less abundant sweats, insomnia, palpitation; a third had intermittence of the pulse, angina granulosa; some had emphysema, amblyopia, and some spitting of blood.

Thirty-seven of his observations related to those who smoke on an empty stomach, in whom vertigo occurred during the morning. The occurrences of vertigo coincided in one third of the cases with the suppression of profuse sweats and with marked diminution of the urinary secretion. All physiologists can interpret this phenomenon. Sometimes the symptoms of the vertigo of smokers have been confounded with cerebral congestion and even heart-disease. Indeed eight of his subjects had been erroneously treated for these affections and subjected to bleeding, purgatives, digitalis, etc., during some time, with great aggravation of their condition. He is forced to believe that one of the cases he is reporting owes his death to an ill-advised bleeding. It is necessary to remember that in nicotine poisoning there is at first a contraction of the vessels, which produces the vertigo; then a reaction, the same organs dilating; this is the period of congestion. The three observations which he has made, make him insist upon a differentiation of the signs which indicate cerebral congestion and lesions of the heart from smoker's vertigo. A careful physician would not deceive himself.

The treatment consisted in the abandonment of the habit, laxatives, tepid baths, magnesia and simple bitters. Twenty-eight times hypodermic injections of ether, stopped the attacks in from five to six minutes. In the thirty-seven subjects who smoked while fasting, thirty-three have been relieved of the vertigo by not smoking until after eating.

## NOTES OF HOSPITAL PRACTICE.

### JEFFERSON MEDICAL COLLEGE HOSPITAL.

### SURGICAL CLINIC HELD BY J. M. BARTON, M.D.

Reported for the MEDICAL TIMES.

*EXCISION OF FOUR RIBS FOR EMPYEMA.*

THIS patient, Joseph F., aged 25 years, had suffered for four years with chronic pleurisy when he was first admitted to this hospital in June, '87. At that time the left side of his chest was filled with fluid, the heart was pushed far over to the right, the respiration was greatly embarrassed and his life was in immediate danger. Under my direction and in my presence his chest was tapped with an aspirator needle by the resident physician, and six quarts of sero-purulent fluid removed, and subsequently as much more. As the fluid rapidly re-accumulated, a permanent opening between the sixth and seventh ribs was made in July, and a drainage-tube inserted.

As the lung failed to expand and the abscess cavity to diminish in size, I proposed, then, to excise some of the ribs, but as his general health had greatly improved and he was able to be out of the hospital he refused, and left the institution several months ago.

Now he returns to us; during these six months there has been a daily discharge of one or two ounces of pus from this opening between the seventh and eighth ribs. On several occasions he has had mild attacks of blood poisoning as shown by chills, profuse sweating and high temperatures.

He has gradually lost flesh and strength, but no disease of the kidneys or of the other lung was detected.

This pus cavity fails to close, owing to the fact that the left lung was for several years pushed firmly into the upper part of the chest by the pleural effusion, and that it has been fastened there by firm adhesions, so that when the fluid was removed it was unable to expand; the chest walls have slightly sunken in, but the rigidity of the ribs prevents further collapse; quite a large abscess cavity still remains; this is too large for nature to fill up by granulations; it holds just as much fluid now as it did six months ago.

I will in this case remove sections of several of the ribs; their divided ends will approach each other, shortening the ribs and permitting them to close down upon the abscess cavity, lessening its size and allowing nature to fill and obliterate the abscess cavity with granulations.

This operation is often spoken of as Estlander's operation, though I believe the first section of the ribs for this purpose was performed by Dr. Warren Stone, of New Orleans.

You notice that during expansion of the chest, the air rushes in through this opening. To encourage the expansion of the lung a small piece of oiled silk was occasionally kept suspended over this opening. This acted as a valve, so that during the expansion of the chest the tendency was to draw air through the windpipe and expand the lung, instead of permitting it to enter the abscess cavity; this dressing permitted the pus to escape freely.

The present opening is between the 7th and 8th ribs on the left side. I shall remove a portion of the 6th, 7th, 8th and 9th ribs. A curved incision from above the 6th to below the 9th ribs is made with its convexity posteriorly, and a flap raised exposing these ribs only to the extent that I propose removing them.

I shall first attack the eighth rib, making an opening through it with a small trephine. Then, with this *rongeur*, which is simply a small pair of bone-forceps with blades very much like the old-fashioned pin-nippers, with one of the blades quite thin, I rapidly cut the rib away, piece by piece, to the extent of 3½ inches. The thin blade of the rongeur is now placed under the edge of the rib above, which is readily severed, and each end removed piecemeal, as the first. Three inches of this rib, which is the seventh, will be enough. One and a half inches of the sixth and two inches of the ninth are now removed. By keeping close to the rib, after separating the periosteum with an elevator, no vessels are seen or injured. The wound is now cleaned, a small drainage-tube laid in it, the flap brought into place and sutured. A large drain is now carried through the original opening and fastened there.

Primary union may be expected in the recent wound. The empyemic cavity will be washed out as before, with antiseptic solutions, and may be expected to gradually lessen as the ribs shorten and collapse.

UNIVERSITY HOSPITAL.

CONCUSSION OF THE BRAIN (*Agnew*).—Seven days ago, this man was admitted to the hospital for concussion of the brain, the result of a fall. He had all the symptoms; light, thin pulse, quiet respiration, cold sweat, low temperature.

The first sign of recovery in these cases is generally vomiting; the stomach seeming first to recover consciousness, as it were. Then the different symptoms just mentioned gradually subside. This is likely to occur in some six or eight hours. But, if respiration becomes labored and slightly stertorous; if the patient turns on his side and draws up his legs, as you see this man do; if his intelligence grows more and more dull, then the case will probably prove one of compression: and if so, then you are justified in trephining.

This man improved slightly until yesterday; but now he appears to be growing worse. He has been treated simply with heat along the spine and on the stomach.

At first the head should be kept nearly horizontal; but if the temperature rises, the head should be elevated, and an ice-pack applied to it. If the pulse grows rapid, look for an unfavorable result.

STONE IN THE BLADDER (*Ashhurst*).—It is often said that children are more subject to this trouble than are men. The percentage of stone in the bladder of children is certainly greater than in men of, say, 60. But while this is true absolutely, it is not relatively so; for the simple reason that there are many times more male children than there are men of sixty.

The prominent symptoms of stone are: pain in the bladder after urinating, especially if the calculus is of uric acid; hemorrhage from the bladder; and also a sudden stoppage of the stream, caused by the falling of the stone against the internal orifice of the urethra.

Cystitis is not often met with in children, in cases of stone; but in adults it is more common, especially when the calculus is a phosphatic one.

Upon sounding the bladder, the patient, a boy of eight, was found to have a calculus. Dr. Ashhurst then performed the lateral perineal operation, and removed a stone as large as a good-sized almond.

No vessels were cut that required ligation, nor was a catheter left in; all the treatment given being simply to tie the boy's legs together.

MEDICO-CHIRURGICAL COLLEGE.

STENOSIS OF THE NASAL DUCT.—Keyser says that apparent stenosis of the nasal duct is often only a slight eversion of the *puncta lachrymalis;* and that in these cases the weeping eye can be cured simply by slitting the canaliculus. Bougieing the nasal duct is a little operation requiring great caution and nicety of touch. He has found in the orbit styles that the operator thought he had inserted into the nasal duct. Again, he has found styles just beneath the flesh, below the inner angle of the eye; both these and the others having been forced through the delicate osseous walls of the nasal duct.

He lays great stress on the fact that frequently the constriction of the nasal duct is caused by an extension upward of a catarrhal process in the nasal cavity proper. Here the primary trouble must also be treated; else there will be no permanent cure.

INVERSION OF THE LOWER LIDS.—For a case of this trouble, where the lashes kept up a constant irritation by rubbing the ball, he performed Von Graefe's operation. An incision is made through the skin of the lid, slightly below its free border. A V-shaped section is now taken from the part below this incision; and upon drawing the edges of the V-shaped opening together, there is a leverage brought to bear on the tarsal cartilages which restores the lashes to their normal position.

ORTHOPÆDIC HOSPITAL.

AMPUTATION OF FORE-ARM.—For some six months there has been at the Orthopædic Hospital a case of caries of the right carpus with gelatinous degeneration. During this time several

operations were made by Dr. Goodman, for removal of the diseased tissues, but without permanent relief. Finally he was compelled to resort to amputation, which he performed at the lower third of the forearm. Anterior and posterior flaps were made of the skin, but the muscles were divided by a circular incision. The particular feature of the operation was the making of a periosteal flap also, with which the ends of the bones were covered.

CHOREA FROM DEFECT IN VISION.—Girl of ten; was first affected by rapid winking of eyes, then twitching of face, and finally, general restlessness. At school she ranks fourth in a class of 42. Dr. Sinkler says he has never known a case of chorea to be at the foot of the class. He decided that the chorea was caused by a defect in vision, and predicted hypermetropia; as that is usually found in such cases. Her eyes were examined by an oculist and found to be hypermetropic. The only treatment will be glasses, unless these should not prove sufficient.

MIGRAINE.—A woman subject to this trouble has had the frequency of the attacks much lessened by ten-drop doses of tincture of cannabis indica three times a day, increased one drop each day till fifteen drops were taken at a dose. Cannabis indica should not be given on an empty stomach, as its rapid absorption is likely to cause uncomfortable head symptoms.

EPILEPSY.—A combination of digitalis and the bromides is often effective, where the bromides alone give little result.

A GOOD TONIC.—Here is a good tonic. The ingredients may be used in various proportions to suit varying conditions:

℞ Hydrargyri chloridi corrosivi
Sol. arsenici chloridi
Acidi hydrochlorici dil.
Tincturæ ferri chloridi
Aquæ, or some other menstruum.
—DR. TAYLOR.

## JEFFERSON COLLEGE.

LACERATED PERINÆUM.—In performing this operation, John C. Da Costa begins at the extreme back of the tear, and works up the posterior wall of the vagina, removing all the cicatricial tissue; the operation being done subcutaneously with a pair of blunt-pointed scissors. In this way the operation is made a comparatively bloodless one; and, in addition, the operator is sure of having all the surface denuded; and runs no risk of having some unrefreshened portion left to delay union.

The parts were brought together by three silver-wire sutures, buried throughout their whole extent. The upper stitch was at the extreme upper part of the denudation. The freshened edges of the mucous membrane of the vagina were stitched together with catgut.

The wire sutures, beginning with the upper one, were drawn through a slotted hard-rubber cylinder on either side, and tightly secured by shot.

After the edges of the wound had been brought still more closely together, by means of a continuous catgut suture, the free ends of the wires were twisted lightly over the median line. In from twelve to thirty-six hours swelling would arise, and then the wires would be cut close to the shot; but the parts would still be held together by the deep sutures.

WHEN NOT TO GIVE MILK.—For several days before an abdominal operation, Montgomery gives his patient a liquid diet, but no milk; as he says milk gives rise to scybalous fæces.

## WILLS' EYE HOSPITAL.

EXTERNAL STRABISMUS FROM A DOG'S BITE.—A child came to Dr. Goodman's clinic at the Wills' Eye Hospital, suffering from external strabismus of the left eye, the result of a laceration of the internal rectus from a dog's bite. He entirely detached the internal rectus anteriorly, and stitched it to the conjunctiva near the cornea.

In order to relieve strain on the new attachment, the eye was then guyed to the right, by passing a silk suture through the conjunctiva, and fixing the thread to the right cheek by adhesive plaster.

---

Diphtheria is prevalent among the nurses and students at Guy's Hospital.

## PHILADELPHIA HOSPITAL.

SKIN GRAFTING.—Skin grafting is now quite common for covering the expansive wastes of old leg ulcers, and other parts of the body denuded of the natural covering. But it is not now transplanted by the square inch; the smaller the graft the better. Here is one way of doing it: Insert a delicate needle under the epidermis of some healthy spot, and after passing a small pair of curved scissors or a sharp scalpel under the needle, snip off a minute portion of the epidermis. Carry this on the needle to the denuded part, and press it lightly down, taking care that the graft rests on its fresh surface.

DANGERS OF THE HYPODERMIC NEEDLE.—Parish cautions against sticking a hypodermic needle into a tumorous abdomen in order to see what is there. Many a patient has been killed, he says, by the escape into the peritoneal cavity of a little of the fluid, after a needle has been withdrawn from an abdominal cyst.

For the same reason he objects to aspirating the fluid; but if aspiration be preferred, he insists that the greatest care should be taken to remove all the fluid, so that none may be left to percolate through the punctured wall of the cyst.

CURVATURE OF THE SPINE.—Beginning curvature of the spine, so frequent in weak girls of rapid growth, can often be avoided by hygienic means. A ladder hung horizontally, on the rounds of which the girl suspends herself by her hands for a few minutes each day, is good; so are dumb-bells.

An excellent plan is to have the patient lie on her back, flat on the floor, for an hour in the middle of each day. Besides this, her position in bed should be nearly horizontal; whereas you will find that these girls generally prop their heads up with two or three pillows. When these measures are not sufficient, we must resort to plaster-jackets, braces, and the like.

BICHLORIDE FOR ERYSIPELAS.—For erysipelas, Bruen has been in the habit of giving tincture of iron and bichloride of mercury internally. In a recent case when erysipelas appeared on the face of a patient with purpura hemorrhagica, a case which would not admit of medication *per os*, he ordered hypodermatic injections of hydrarg. chlor. cor., gr. 1-100, twice a day. The effect was remarkable, for in twenty-four hours, or after two doses, the erysipelas had disappeared.

## SURGICAL CLINIC OF THE MEDICO-CHIRURGICAL HOSPITAL.

SECTION OF SUPERIOR MAXILLARY NERVE AT BASE OF SKULL.—Dr. Garretson performed the operation of removing the whole of the second branch of the trifacial nerve, making the section at the foramen rotundum, before the classes of the Medico-Chirurgical and Dental Colleges, for the fifth time this present term. The time occupied was just twenty minutes. This operation is so infrequently done that it has been witnessed by few medical students. The facility with which it is to be accomplished by the aid of the surgical engine, as demonstrated by Dr. Garretson, is certainly calculated to inspire anyone who sees it with a self-confidence, as to an ability to repeat the performance. The clinician told his class that not only had he never lost a patient from the operation, but that no worse results had ever troubled him than an occasional secondary hemorrhage or an attack of erysipelas. The patient in this case is a lady from Massachusetts, who has been a great sufferer from neuralgia for a number of years past. There was present at this clinic, Dr. K., operated on after the same manner and for the same purpose some two months back. His relief from pain remains as before reported. A third patient, a Mr. B., of Burlington, N. J., whose inferior maxillary nerve was removed in its entire length from the mental to the oval foramen, is reported as continuing entirely free from pain, his operation having been done at the commencement of the course, last September. Dr. Garretson spoke of this case as expressive of the greatest physical suffering he had ever encountered. The largest part of these operations it is to be understood are done exclusively by the sense of touch, a sense which is shown to be quite as reliable as that of sight, even where the handling concerns a bur which is being whirled to the extent of ten thousand revolutions to the minute.

PHILADELPHIA
# MEDICAL TIMES.

PHILADELPHIA, JUNE 1, 1888.

## EDITORIAL.

### THE PHILADELPHIA MEDICAL TIMES.

THIS number of the journal will be sent to several who are not subscribers; but who, we hope, will thereby be encouraged to become such. It will be seen that the *Times* endeavors to represent to its readers an epitome of the clinical work done in Philadelphia. Being the only medical journal which bears the name of this city, it seems that the work of this great medical centre is most appropriately recorded in the PHILADELPHIA MEDICAL TIMES.

One hundred and fifteen public clinics, to which students are admitted, are given weekly in this city.

While the development of the West has been so great that even Philadelphia can no longer claim to be the only medical centre, still there are thousands of physicians who look to the great schools here as their own, and to whom the work of Agnew, Pancoast, Da Costa and their colleagues is of interest.

What these distinguished teachers, and many more, are now doing, we endeavor to show in our Clinical Notes. These notes are taken down by our reporters at the clinics. They must not be looked upon in the same light as the finished productions of these teachers. We record the fact that one man prescribes a certain drug in a certain case. This may be his routine treatment, or it may be simply an experiment, which future investigation may sustain or not. In any case, these notes form *the latest, the freshest intelligence concerning Philadelphia clinical work.*

The matured results of this work are presented in our Society Notes. We have not space at our command to print the proceedings in extenso, nor, as a rule, has the busy practitioner time to read them. We content ourselves with reviewing these proceedings, and picking out the important points.

Our Paris and London letters have become widely known, and are quoted more extensively than the foreign correspondence of any other American journal.

By opening a department headed "Letters to the Editor," we seek to draw the journal and its readers more closely together, and to establish a community of interests between them.

In all respects, we endeavor to make the TIMES a *useful* publication, to study the needs of our supporters, and not to degenerate into a mere recorder of pathological curiosities.

If those who receive this journal conclude that we are fulfilling a want which they experience, we will be pleased to receive their subscriptions; if not, we will be glad to receive their suggestions as to how their needs can be better served.

---

AT the Medical and Surgical Society of Baltimore, Dr. S. T. Earle reported a case of syphilitic stricture of the rectum of long standing, treated by electrolysis. At the first sitting only a very small sound could be passed. Now a sound two inches in circumference passes with ease. The condition of the patient is much improved in all respects. No other remedy was used during the treatment by electrolysis. The case had been previously operated by posterior linear proctotomy with subsequent dilatation, but without permanent benefit. When he began treatment of the case nothing seemed to promise so little success as electrolysis,

but the result has exceeded his most sanguine expectations.

In the discussion on this case, Drs. Chambers, Rennolds, and Rohé, reported cases of urethral stricture successfully treated by the same means.

## A GOOD WORK.

THE Committee of Dietetics and the Section of Diseases of Children of the American Medical Association took up the consideration of the question of Infant Feeding. This was most wise. Few subjects could have been discussed which are of equal importance to the physician and to his clientage. The proportion of deaths from gastro-intestinal diseases, in children under five years, is so great as to be a standing disgrace to the medical profession. It cannot be gainsaid, that a more thorough acquaintance with the physiology of digestion would greatly diminish this mortality.

We occasionally hear the rather remarkable assertion that cow's milk, in its natural condition, is to be preferred as the proper food for infants. The fact that a calf has four stomachs, while a baby has but one, and that a very little one, ought to show that the food elaborated by Nature for the calf is scarcely suited to the infant. Besides, the calf begins active exercise as soon as it comes into the world; the babe lies helpless for months.

But little reflection is needed to develop other objections to milk. Of all foods it is the most liable to impurity as to the source of supply. The discussion upon the transmission of scarlatina by the milk of sick cows is still fresh in our minds. The finest beef in the world is that supplied to the London markets; and yet, a few years since, the Registrar-General of Great Britain stated that fifty per cent. of these cattle were tuberculous. The transmission of disease from domestic animals to man is now attracting considerable attention; it is almost a virgin field; and the possibilities in this direction are unknown.

But this is by no means the only objection to milk. It varies greatly in quality, in the proportion of its constituents, etc., according to the breed of the animal, its health, food-supply and the care taken of it.

Milk is proverbially easy to adulterate; and the water from the barn-yard well is only too apt to contain many other ingredients besides HO.

Milk is of all foods the most prone to decomposition; and demands the greatest care and the most scrupulous asepticism to preserve it in hot weather.

Milk is also exceedingly apt to absorb impurities. Put a pan of milk in the refrigerator in which a bit of tainted meat has fallen down into some nook or corner; and the milk will soon absorb the odor of the decomposing substance, and also its poisonous properties. The list is not yet exhausted, as the celebrated researches of Vaughan have opened up new possibilities of evil from this "model food." It would be indeed difficult to find a food to which as many or as vital objections could be raised as against ordinary cow's milk.

The woman who claims to have cured her child of cholera-infantum by feeding it with raw peaches, occupies far more defensible ground than the physician who orders an exclusive milk diet.

To a large extent, the same objections hold good in the case of such foods as require milk to be given with them. Whether these add to the milk any constituents in which it is deficient, whether they increase its digestibility, hinder the formation of hard curds, or simply increase the child's difficulties by adding other elements which its

digestive powers are unprepared to cope with, may be passed by, in view of the fact that the grim array of indictments against the milk with which they are given, still remains on the calendar.

The qualities to be required of a perfect food for infants are as follows:

1. It should be sufficient in itself to fully nourish the infant, without the further addition of any uncertain substances.

2. Its constituents should be in such a state that even the weakest digestive powers can utilize them. Stronger children need less care; but with them the question is less important. It is the feeble infant which requires the most exact and scientific feeding.

3. It should be put up in such a shape that the least amount of intelligence and of labor are needed to prepare it. A food which requires a chemical laboratory, or a tedious and complicated method of preparation for use, is unsuitable for general consumption.

4. It should be so put up as to keep well in all climates, and not be prone to spontaneous decomposition.

As Vaughan so well puts it: "There is the same reason for the drying of milk and the preservation of its solids that there is for the curing of meat or the canning of fruit. The dried milk solids may be transported any distance and kept for any reasonable length of time, if properly prepared, without undergoing putrefactive changes."

5. Finally, it should be sold at such a reasonable price as to bring it within the reach of all classes.

In conclusion, we will say, that this subject ought to be handled without gloves. Of the multitudinous infant foods in the market, each and every one is better than all the others, according to the manufacturer. No competent authority has as yet conclusively pronounced in favor of any one article, still less shown in what conditions each is most appropriate. Meanwhile, as each physician goes in turn over the same path, painfully repeating experiences which have already been fully performed by others, each new experimenter marks by the little graves the process by which he satisfies himself as to the proper use of these foods.

How many infant deaths are due to the fear that one may be thought an advocate of some particular firm's goods! It is time that this silly affectation is dropped. The American Medical Association should define what constitutes a perfect food, and leave the manufacturers to come up to the standard so set. As the Czar said, when he drew a straight line to represent the course of the railway, "There is your road; let the people move up."

Then, if any manufacturer has succeeded in producing a food which complies with these requirements, let him have the credit his skill has earned. By all means, this committee should be continued. Let them conclude their work, and give us a report which will embody the principles of infant-foods and so enable us to reject empiricism in infant feeding.

## AMERICAN MEDICAL ASSOCIATION.

### SECTION OF DIETETICS.

**An Abstract of the Report of the Special Committee of Dietetics.**

**READ BY E. A. WOOD, M.D., of Pittsburgh, Pa.**

THE width of the subject itself makes it impossible to formulate an exhaustive report, and your Committee feels that there are very many able men who, through no discourtesy, are not on its rolls of membership, but who ought to be there. We therefore come before you with this report, and especially recommend that you take such action as to insure the continuance of the work

which is begun, either by special committee, or by the establishment of a section especially for this work.

Americans are beginning to recognize the value of dietetics, and the question of what to cook, and what to eat and drink, that which will secure the highest degree of comfort and extend life, is being asked more and more. This has turned dietetics into a practical knowledge. It stands in the front rank of the medical art. Dietetics has joined hands with organic chemistry, to elevate the popular tastes, and promote a deeper scientific research that will in the end find that which will maintain the human life, appease hunger and promote health from the cradle to the grave. Dietetics has joined hands with physiology, and clearly illustrated the various properties of vegetable and animal tissues. We know that food which is suitable for digestion prevents disease, and being well prepared, is made inviting to the taste and suitable to nutrition. Dietetics has taken the physician into its hands, and has led him into new and fresh fields. It is found to be easier and far more profitable to lead the patient back into the path of health by a judicious nourishment and dieting, than by giving him horrid doses of powerful medicines, etc., etc. Perhaps in no other class of maladies is the fitness of the alimentation so supreme in importance as in infancy. The mode of feeding children and treating them under one year of age is in many cases almost criminal, when we consider the large percentage of deaths.

It is believed that a large majority of cases of sickness of children, especially during the summer months in cities, is caused by over-heat, but the effects of hot weather and crowded cities, though bad, is over-rated. There are two causes of this trouble; first, the vendor of adulterated milk—milk that has been kept in vile vessels—watered milk—adulterated milk—milk that has been obtained from diseased cows, who have been confined in hot filthy stables throughout all their miserable lives—such milk as this slays thousands of helpless babes in this land of ours each year. Such milk as this is unfit for any purpose, and it should be kept out of America. Those who vend such milk are deliberate criminals. The other class of infant's diseases is caused by mothers and nurses who will persist in over-feeding babies, dreading starvation, and forgetful of the fact that when a baby cries it wants water, not milk.

As to the difficulty of obtaining milk, thousands of children might be saved, by reasoning out what is the best substitute, and what is the best substitute for the individual case. Cow's milk would seem to be the most rational substitute; but there are many cases where the infant cannot digest the milk, where it can digest some starch foods. In the absence of knowledge, we go on treating the infantile martyrs, regulated in our course of treatment only by whatever common sense we have, and the personal experience of the individual practitioner.

Through the knowledge of dietetics the members of the Medical Profession have become the custodians of the public life of the people of America. It is our duty to attend to the health and future welfare of the American race. It is the duty of this Association, of this Medical Convention, to warn our people of the danger threatened, and to direct its powerful organization against the evils, which if not arrested, will result in disaster to the people and nation.

The Committee would also call the especial attention of the Association to the various so-called artificial foods that are being manufactured, and that fill our drug stores throughout the country and are sold as fit food for infants and invalids. Many of these compounds are highly injurious, and yet they are being sold in large quantities. On this subject the American Medical Association must exercise its authority in the most positive manner. What is wanted is a thorough investigation of these various compounds by a committee of competent men who will command the confidence of the country.

*REPORT OF SUB-COMMITTEE ON INFANT-FEEDING.*

Your Sub-Committee on Infant Feeding respectfully reports that it has only had the subject under consideration for about two months, and during this time it has opened correspondence with some of the leading authorities, both in

this country and in Europe, upon the very important questions submitted to it, especially with reference to the proper diet of infants. Though not prepared to make a final report upon the subject at present, it believes that some facts have been elicited, which are valuable and which are of sufficient interest to bring before this Association.

Thus far, replies have been received from Dr. Eustace Smith, of London; Dr. J. Lewis Smith, of New York; Dr. Victor C. Vaughan, of Ann Arbor, Michigan; Dr. George H. Rohé, of Baltimore; Dr. F. Forchheimer, of Cincinnati, and others, to whom we desire to return thanks for their assistance and courtesy. (The correspondence and replies to queries submitted are appended to this report.)

The leading facts thus far obtained may be briefly stated as follows:

1. In the case of an infant, or a child under ten months of age, deprived of breast-milk, the artificial substitute provided should be made to correspond with human milk as closely as possible, both in its chemical constitution and in its physical characters.

2. Fresh, unadulterated cow's milk, when properly prepared, is an acceptable substitute for breast-milk. But since the casein of cow's milk coagulates in a heavy, dense mass, while breast-milk curd is light and flocculent, some expedient must be resorted to in order to make the former resemble the latter, so that the digestive powers of the infant shall not be unduly taxed. The casein of cow's milk, according to Dr. Eustace Smith, as the rule, traverses the infant's alimentary tract and may be found unchanged in the fecal discharges. It is, therefore, a constant source of irritation, and often gives rise to diarrhœa and entero-colitis. One of the most decided advances in dietetics in modern times, is the preparation of cow's milk with the aid of digestive agents, as in the method recommended by Prof. Frankland. In this method the casein of a portion of the milk is first peptonised by fresh calf's rennet, and to this is added a portion of fresh milk, after heat has been applied to check the process and to prevent complete predigestion; some milk-sugar is finally added, and thus a mixture is obtained which closely approximates human milk in its chemical composition. It has, moreover, been found to serve as an efficient substitute, where the mother's milk is of poor quality, is inadequate in quantity, or is entirely wanting. The special feature of this method is the peptonising of only a part of the casein, with the employment of heat at a certain stage to arrest the process so that the food shall not be completely digested. The addition of the carbo-hydrate (milk-sugar in this case) is necessary, in order that the food shall closely resemble human milk. The employment of stale, foul-smelling, partially decomposed digestive ferments, for the purpose of preparing cow's milk for infant's food is condemned. The necessary skill and intelligence required to insure uniformity of result for the extemporaneous peptonising of milk is rarely to be found in the house hold, and where this process is adopted, the experiment often turns out to be unfortunate and injurious to the child.

3. As the rule, raw starch is inadmissible in the diet of young infants, because the digestive powers of the infant are rarely sufficiently active to convert crude starch into a soluble form. The plan advocated by some, of adding the starch to the milk in order to mechanically break up the curd, is unphysiological and very objectionable. The products of the complete digestion of starch are glucose and saccharose (mal tose), and these, in various forms, have been recommended to be used as addition to the milk, under the name of "Liebig" foods. When in excess, these substances cause diarrhœa, and when given alone do not sufficiently nourish the child. Dr. J. Lewis Smith speaks favorably of dextrine, which is a partially digested starch, as a good substitute for glucose and saccharose in such artificial foods. The fact cannot be too strongly insisted upon, which is taught both by clinical experience and by physiological investigation, that the food of either infants or adults, except in special emergencies, should never be fully predigested, for fear of permanently weakening or destroying the digestive functions of the stomach.

4. A great part of the large mortality of infants in all our cities is due to the bad quality of the milk supply, particularly that going to the poorer classes. Professor Vaughan declares that many deaths from so-called cholera-infantum are really caused by milk containing tyrotoxicon. Authorities are almost unanimous upon the point that in large cities, at least during hot weather, all milk for the nursing bottle should be boiled several times a day, in order to destroy ferment-germs. It is better, at such time, that the food should be freshly prepared for each feeding. In some cases, owing to the variability in the quality of the milk-supply, it may be advisable to resort, for a short time, to condensed or evaporated milk; in either case diluting and adding cream, or an equivalent, soluble carbo-hydrate, in order to make an artificial breast milk. Desiccated partly peptonised milk, in the form of a milk food, containing partly converted starch (soluble starch and dextrine,) and a small quantity of lactose is a convenient (and when well made, a very efficient) substitute for the mother's milk.

5. Where a child is a premature birth, or is feeble from other causes, as great care should be observed in preparing its food as in prescribing its medicine. Experience has demonstrated that success in infant-feeding is dependent upon the ability to individualize the patient, and to select the proper food for each case. For very delicate infants the mother's milk is often found not only inadequate to properly nourish the child, but also positively injurious. This is generally admitted where some obvious dyscrasia exists, as the tuberculous or syphilitic. It is a fact that in such feeble infants artificial mixtures can be made which will agree with the weak digestive functions and satisfactorily nourish the child.

In conclusion, your Sub-Committee would direct attention to the remote and far-reaching effects of the mal-nutrition resulting from improper feeding in early life, to be witnessed in chronic invalidism or in premature death of the individual, and to the inevitable physical degeneracy threatening the race where the principles of infant dietetics are neglected. In view of the importance of the subject, the Sub-Committee respectfully ask to be continued in order to further investigate the matter, and to report to the next meeting. All of which is respectfully submitted.

FRANK WOODBURY,
*Chairman of Sub-Committee on Infant Feeding.*

## A SYMPOSIUM ON INFANT FEEDING.

BY DRS. EUSTACE SMITH, OF LONDON; J. LEWIS SMITH, OF NEW YORK; F. FORCHHEIMER, OF CINCINNATI; GEO. H. ROHÉ, OF BALTIMORE; VICTOR C. VAUGHAN, OF ANN ARBOR, MICH., AND FRANK WOODBURY, OF PHILADELPHIA.

[IN the effort to establish some fixed principles with regard to infant feeding, particularly from the clinical standpoint, questions were formulated and sent to various gentlemen of experience in the treatment of children's diseases; and the following replies were kindly furnished by those whose names appear at the head of the article, which is a portion of the report on Infant Feeding of the Committee on Dietetics, American Medical Association.]

*Question I.*—Are malt sugar foods liable to produce abnormal fermentation in the stomach, especially with infants? Do they often do so? Can you assign the reason in cases where it occurs? Is maltose in excess in the food of infants objectionable, and why?

I have never seen any signs of fermentation which I could attribute to the influence of maltose. It is true that all infants cannot digest maltose or malted foods, but even in these cases, I have never seen reason to suspect the difficulty to be due to the fermentation of maltose. (Eustace Smith.)

I believe that all sugar in excess of that normally contained in mother's milk is liable to undergo fermentation before it can be absorbed, and hence, by interfering with the normal decomposition of the bile in the prima via, hinders absorption of fats and possibly of peptones, and so interferes with nutrition. (Rohé.)

It depends entirely upon what form the malt sugar is administered in. In general it must be said of the carbohydrates that they are best administered to infants in the form of glucose,

Maltose is not a glucose, and ought not to be administered to infants in whom the salivary and pancreatic functions have not been established. In regard to the sugar ferment of the stomach, nothing is known as far as relates to infants. (Uffelmann's case is the only one on record, and that was in a boy.) (Forchheimer.)

Yes. Malt sugar undergoes fermentative changes very readily, and often does harm when used as an ingredient of infant's foods, on account of its fermentation. (Vaughan.)

Maltose can be assimilated by the infant only in very small quantity; when administered in excess it gives rise to diarrhœa, probably owing to its fermentation. It is also objectionable because it starves the tissues, while it increases the fat, giving an appearance of plumpness and health to the infant which, however, is delusive, as seen by its feeble powers of resistance to disease. (Woodbury.)

*Question II.*—If the Liebig or malt-sugar foods are likely to ferment in the stomach before assimilation commences, is it advisable to add them to cow's milk, in which the resulting acidity tends to transform the casein into indigestible curds?

I do not think it advisable to add maltose to cow's milk in greater quantity than would be necessary to raise the proportion of sugar in cow's milk to make it correspond in this respect to human milk. For this purpose, I think pure cane sugar is preferable to preparations of uncertain composition. (Rohé.)

In Liebig's food the starch is converted into dextrose, as well as into maltose. (Forchheimer.)

It is not advisable to add malt-sugar to cow's milk which is to be used for infants' food. (Vaughan.)

As ordinarily practised, the feeding of children with Liebig's foods with (milkman's) cow's milk, is not advisable and often distinctly injurious. (Woodbury.)

*Questions III and IV.*—Should not dextrine be preferred to malt sugar for ingestion in the case of infants, and if so, for what reasons? Can dextrine ferment before it is changed to sugar?

With regard to the first four questions relating to the fermentability of malt extract, I think they should be addressed more appropriately to the physiological chemist, than to the physician. (Eustace Smith.)

I have no opinions to offer upon these points. I have seen it stated somewhere that dextrine does not ferment before it is changed into sugar, but this is not remarkable, since dextrine is simply one of the stages of the process by which starch is converted into sugar, or, carrying the process further, into alcohol and acetic acid. But I can readily understand that it may be advantageous to have something for the amylolytic ferments present in the saliva and pancreatic secretions, of even quite young children, to act upon, rather than that these ferments should be mingled with the food in the stomach and intestinal canal, without an opportunity of undergoing their physiological decomposition. (Rohé.)

Dextrine must first be converted into dextrose before it can be utilized by the economy. Dextrine, which is a starch, cannot be fermented until converted to dextrose (grape sugar). (Forchheimer.)

Dextrine is preferable to malt sugar, because it (the dextrine) does not ferment so readily. I do not think that dextrine can undergo fermentation before it is converted into sugar. (Vaughan.)

The chemistry of the different forms of glucose is still in an unsettled condition. I am opposed to an excess of any and all forms of sugar in the diet of infants. Dextrine is partially digested starch, and is readily converted into dextrose by the digestive fluids. It is preferable to maltose, because it affords an opportunity for physiological activity of the digestive fluids containing ptyaline, (salivary and pancreatic secretions, succus entericus.) (Woodbury.)

*Question V.*—Will any of the ordinary artificial "Infant Foods" now in the market thoroughly nourish the child without the addition of cow's milk?

No artificial food will efficiently nourish an infant unless cow's milk be added; for all preserved foods want the living antiscorbutic principle which is only to be found in fresh foods. In other respects, many of them, such as the desiccated milk foods, contain in themselves, as far as I know, all the elements of nutrition. (Eustace Smith.)

None of those foods, which I have studied either theoretically or practically, seem to me to fulfil the indications. It seems strange, however, that with the large amount of definite knowledge we possess upon the physiology of digestion, chemists have hitherto failed in giving physicians a trustworthy preparation based upon physiological principles. (Rohé.)

Yes; provided you include milk foods, as ——'s or ——'s. (Forchheimer.)

Yes, there are one or two. (Vaughan.)

I think that a good milk food answers the requirements very acceptably. (Woodbury.)

*Question VI.*—Do the ordinary so-called infant foods add any constituent to cow's milk which it does not contain in sufficient quantity already?

I do not think that the ordinary infant's foods add any constituents to cow's milk which it does not already contain in sufficient quantity, but many of them, by presenting certain of the constituents in a more digestible form, may contribute greatly to the nutrition of the infant. For instance, few children digest a sufficient quantity of the curd of cow's milk. The greater part of the casein, in the shape of a dense mass with the toughness of cheese, passes almost unchanged by the bowels. Where this isthe case, the child runs a great risk of being under-nourished unless he assimilates some substitute for the missing curd. This may be supplied by the addition of a well-selected infant's food. (Eustace Smith.)

None, in my opinion, except sugar. (Rohé).

Yes. (Forchheimer).

Yes, the best add dextrine. (Vaughan.)

If the cow's milk is diluted, some of the foods do, by making up the deficiency of carbo-hydrates or hydrocarbons. (Woodbury.)

*Question VII.* Should not all the infant foods that are required to be given with cow's milk of ordinary quality be rated in value as sugar only?

I cannot answer. (Eustace Smith.)

Yes, because any other constituents are unnecessary and probably injurious. (Rohé.)

No, salts and some sugar. (Forchheimer.)

Yes. (Vaughan.)

There are many that are inferior in food value to plain sugar.—(Woodbury.)

*Question VIII.*—Do any of the "Milk foods" contain more than fifteen per cent. of solid constituents of cow's milk?

I cannot answer. (Eustace Smith.)

I have before me as I write, a preparation for which the claim is made that it contains 50 per cent. of cow's milk. Now, as cow's milk contains only twelve per cent. of total solids, there are in this special preparation only six per cent. of milk solids. Another preparation in my hands at this moment is said (on the label) to contain fifty per cent. of the solid constituents of the milk. The other fifty per cent. is said to consist of dextrine and soluble starch. I have had no practical experience with this preparation. However, if the claim made for it is true, this would answer the question in the affirmative. (Rohé.)

Yes, if I understand the question correctly. (Forchheimer.)

Yes. (Vaughan.)

I do not know. (Woodbury.)

*Question IX.*—Recognizing that the casein of breast-milk is partially a peptone, must not cow's milk, with its tough casein, be poorly adapted to the rearing of infants whose digestion is feeble in comparison with that of the calf?

I think the cow's milk should be specially prepared for the infant's stomach, whether by pre-digestion or otherwise. (Eustace Smith.)

In practice I have found that many infants can digest the casein of cow's milk, but this pre-supposes intelligent feeding which is not always attainable. Such children, however, much oftener suffer from digestive derangement than nursed infants. (Rohé.)

I do not recognize the casein of breast-milk "as partially a peptone." Human milk does contain a small quantity of peptones but we are far from certain that they are derived from the casein. (Forchheimer.)

Yes. (Vaughan.)

Yes, especially if the infants are at all delicate. (Woodbury.)

*Question X.*—In view of the difference

in the character of casein of human milk and cow's milk, is it not advisable to have the cow's milk partially predigested, or sufficiently so as to render it like the casein of human milk and as readily digestible by the infant?

Cow's milk should be especially prepared for the infant's stomach, either by pre-digestion or otherwise. (Eustace Smith.)

If this could be attained in practice, I think it would be a great advance in the art of nourishing children deprived of breast-milk. The preparation referred to (under VIII) is said to be partly so digested. The claim deserves investigation by experts. (Rohé.)

If cow-casein could be so changed as to be identical in all respects in its properties with human casein, the problem of artificial feeding would be almost solved. (Forchheimer.)

Yes, this is a very important point. (Vaughan.)

"This is a consummation most devoutly to be wished." (Woodbury.)

*Question XI.* — When farinaceous foods are added to cow's milk for the purpose of preventing the hard coagulation of casein by their physical action, do they not add another indigestible element, and is not their value for the purpose dependent upon their insoluble or indigestible character?

Cow's milk should be specially prepared for the infant's stomach (answer to previous question). If this be attempted by the addition of flour or similar starchy compounds, I think the farinaceous addition contributes little to the nutrition of the infant. (Eustace Smith.)

I think the practice objectionable, at least before the child has reached the tenth month of age. (Rohé.)

It depends entirely upon the age of the infant. (Forchheimer.)

Yes. (Vaughan.)

Yes, the object of adding corn-starch or similar substances is avowedly to make the curd less cohesive, and not to add any nutritive element to the food. (Woodbury.)

*Question XII.*—Is the peptonizing of cow's milk practical in the household and can it be uniformly and properly performed by the nurse or mother, or does it require the supervision of an experienced chemist?

The peptonizing of cow's milk is quite practicable in the nursery; the ordinary process does not digest all the curd, but still enough for all practical purposes. (Eustace Smith.)

In a few cases I have been able to make mothers understand the process of peptonizing milk; but in the majority of instances my efforts have not been rewarded by success. The proceeding is so troublesome that mothers get careless, and nurses—well, the people who need nurses most are generally unable to employ them. (Rohé.)

No. The method most commonly used (——'s) is bad; and it is the only one which can be carried out by the intelligent (!!) attendant. (Forchheimer.)

It should be done under the direction of a competent chemist. Nurses will not do it as it should be done. (Vaughan.)

I consider it impracticable. The women intelligent enough to conduct the process properly are engaged in teaching in some college and if married, rarely if ever, have children. (Woodbury.)

*Question XIII.*—For infant-feeding should the casein of cow's milk be wholly pre-digested, or fully peptonized. and if not, why?

I think it objectionable to relieve healthy organs of any of their duties; hence I object, in the interest of the future health of the individual, to wholly pre-peptonize, pre-emulsify, or pre-pancreatise any food. While there may be no exact observations on record, I think a stomach whose peptic glands are not called into use might get altogether out of the habit of digesting, and so be of no more use to the individual than a bag of rubber which had the power of rhythmical contraction. (Rohé)

I think that peptones (not peptonized milk) can be used to great advantage in proper cases. Peptonized milk is out of the question, as we have no method by which this can be obtained with accuracy. The use of pancreatic ferments, in my opinion, is fallacious, as it introduces into the intestinal tracts, especially very young ones, products that are decidedly dangerous in their actions. I have made some experiments with the ——'s process, which has pushed me to the conclusion that my reasoning is correct. I have

seen infants under two months do well on cow's milk, when they would have died with mixtures. One series of experiments was conducted upon foundlings, half of which were given milk undigested, and the other half ——'s digested. The result was that those on milk did well, and the other half had to be returned to milk, otherwise they would have died. Besides, trypsic and stomachic digestion do not agree together. (Forchheimer.)

The casein should not be wholly digested. It is unscientific to feed a child upon food the proteids of which are wholly digested. The stomach must have some work to do, or it will become enfeebled by disease. (Vaughan.)

No. It is unphysiological. (Woodbury.)

*Question XIV.*—Since pancreatine is itself subject to putrefaction, should it not therefore be used for the purpose of digesting milk *only* when freshly made? Is the offensive odor of some pancreatic preparations that are sold in the market due to impurity or decomposition? Is there danger that such putrefactive changes are likely to impart deleterious qualities to the milk?

The pancreatine should, of course, be used before it has putrefied and lost its properties. (Eustace Smith.)

I think it highly probable that ptomaines may result from the decomposition of pancreatic ferments. I must confess, however, that I have no observations upon this point beyond the violent appeal to my olfactories made by some pancreatic preparations. (Rohé.)

Whatever has been said about ——'s, is true of all pancreatic products. (Forchheimer.)

Yes, the offensive odor comes principally, I think, from impurities; though some pure preparation, even if it could be obtained, would probably decompose. (Vaughan.)

Unless nastiness be a recommendation, the commercial digestive preparations should be excluded from the household. (Woodbury.)

*Question XV.* What proportion of cow's milk found in our large cities during the summer months is in a proper condition to feed children? Is not the cause of the great mortality at this season largely due to the fact that fermentative changes take place in the milk before it reaches the consumer?

In large cities during the summer, cow's milk brought from a distance is, no doubt, often far from fresh, and therefore ill-adapted to further healthy nutrition, if not actually injurious to the recipient. (Eustace Smith.)

Sanitarians are agreed that the methods of milk supply in large cities urgently demand reform. There is no doubt that during the hot weather of summer decomposition sometimes occurs in milk which renders the latter violently poisonous. The outbreaks of tyrotoxicon poisoning so well studied during the last two years by Prof. Vaughan, Drs. Newton and Shippen Wallace and Prof. Shearer, of Iowa, prove this. Added to this danger is that of allowing milk from tuberculous cows (and nearly all city cows are tuberculous) to be sold. I have advocated the inspection of milk by qualified officials in this city, but I am not sanguine that such inspection would remove the most serious danger, which is not adulterated milk, but milk that is unwholesome or dangerous from other causes. (Rohé.)

I know of but three milkmen in this city (Cincinnati) who supply milk which can be absolutely relied upon in summer. Yes. (Forchheimer.).

I think that poisonous milk is the cause of a large per cent. of the mortality among children, especially among the poor classes of our large cities. It would be impossible to say what proportion of the milk supplied to the cities becomes unwholesome, in the hands of the small retail dealer and also after it has been sold to the poor, who have no means of keeping it at a low temperature and in a non-vitiated air. (Vaughan.)

To the dangers from adulteration with ditch-water or that from infected pumps, we have that from metallic poisoning by the cans. (See article by Dr. Geo. Hull, PHILA. MEDICAL TIMES, vol. xvii, p. 256.). (Woodbury.)

*Question XVI.* What recent advancement has been made in foods for infants that is worthy of consideration in furnishing us with an artificial food at all

analogous to, or approximating towards, human milk in composition and digestibility?

I have no personal knowledge of such advancement. (Rohé.)

None. The last one was only applicable to individual cases, however. (Forchheimer.)

It is possible that such an advance has been made; the matter is still under trial before the profession. (Woodbury.)

I think that the addition of dextrine instead of sugar or starch to the milk solids and the partial digestion of casein are important advances. (Vaughan.)

Dr. J. Lewis Smith, New York, writes as follows:

April 24, 1888.

According to my observations, babies can digest dextrine readily, even those under the age of three months, who digest starch with difficulty. I have during the last two years employed in nursery feeding, with the best results, wheat flour, prepared by being boiled five days, dried in a bag and then grated and sifted, and placed two days in pans in an oven at a temperature of about 100°. The starch by this process is largely converted into dextrine, but not into glucose, and the flour has the reddish yellow color of dextrine. When kept for use, I believe it is more stable than the glucose preparations made by Liebig's formula which are found in the shops. But milk should be the basis of all infantile foods. Neither starch, dextrine or glucose sufficiently nourishes without it, but we may use one of these foods without milk for two or three days in unsettled states of the stomach with good result. If we use starchy food, it should be boiled several hours, which changes a portion of the starch into its soluble form, the first stage in digestion. Barley flour or oatmeal, thus prepared, will often agree with infants, but not so certainly as dextrinized starch.

I think that it is not best to feed infants habitually with fully digested food, for the stomach of the baby should be allowed to accomplish what it can without being overtaxed. Its normal functional activity produces a healthier state, and conduces to a better condition of the infant in my opinion, than when there is no functional activity except that of assimilation, as is the case when fully digested food like glucose is given. The same rule applies, I think, to the digestive organs as to the muscles. If we insist on quietude of the muscles, they atrophy and become feeble. If we fully predigest the infant's food, it seems to me probable that glands or follicles which furnish the digestive ferments, lacking the needed stimulation, are likely to suffer deterioration in their functions and furnish ferments of poorer quality and of less quantity, than when the food is of a nature that requires some digestion. For this reason, I regard favorably the use of the dextrine rather than the glucose preparations obtained from starchy foods. It has long been the belief of some of the best authorities in the dietetics of infancy, that farinaceous substances, as barley flour, added to milk tends to prevent, by mechanically separating the particles of casein, the formation of large and indigestible coagula of this substance in the stomach. This has been one reason of my preference for the use of partially converted or partially digested starch instead of glucose in the feeding of infants, for glucose being completely soluble cannot have this mechanical action.

Dr. L. A. Sayre, of New York:

*Mr. President:*—I was so fully impressed by the paper read by Dr. Woodbury that it seems to me to be the duty of this Association to take some further stand in advising the country at large in regard to the feeding of the rising generation. The wretched dosing that the majority of people have to stand in the way of food, is carrying our children to the grave by the score.

The Association should appoint a committee of competent men to investigate and keep before the public some facts in regard to this most important subject.

I therefore propose the following resolution: That the Committee on Dietetics be continued and empowered to enlarge its number, and that the Committee of Arrangements are hereby empowered to give this committee and its work a proper place in the program of the next meeting. (Applause.)

Dr. Benj. Lee, of Phila.:

*Mr. Chairman:*—I had already pre-

pared a motion to the same effect, and I should like to amend the resolution which has been offered by adding "That this committee be, and is hereby instructed to present a report at the next meeting embodying the general principles to be observed in a rational system of dietetics."

Dr. Sayre:—I accept the gentleman's amendment.

The amendment was put and carried, and the original resolution as amended was then put and unanimously carried.

*SECTION OF DISEASES OF CHILDREN, DR. WAXHAM, Chairman.*

The first paper was read by Chas. W. Earle, M.D., Prof. of Diseases of Children, Woman's Medical College, and Prof. of Obstetrics, College of Physicians and Surgeons, Chicago.

This is a long and exhaustive article embracing many important points which we would gladly present if space would permit. We are, however, obliged to confine ourselves to a few brief extracts:

"The greatest mortality of all climes and among all nations is due to the lack of mother's milk. The question par excellence rising above all others is Infant Diet.

Baginsky, the latest German author on Kinderkrankheiten, says the difference between mother's milk and cow's milk is as follows: The water is about equal. Albumen, salts and butter are in greater quantity in cow's milk, and of sugar less. According to Dogiel there is not as much difference between mother's and cow's milk as has been formerly supposed. Out of cow's milk it is possible to manufacture a substitute which is in every essential equivalent to mother's milk. The greatest difficulty is to obtain good cow's milk. Two methods of preserving milk are used: First, it is condensed with sugar, and second, without this ingredient. The great trouble in the condensing process is that too much sugar makes it indigestible, and if you take milk of this kind and dilute it so that it can be digested, it is too weak. Peptonising milk is not a new idea, it is very old, and great difficulties have been found in bringing about the process.

We must acknowledge three facts:

1st. That mother's milk is the food *par excellence* for a baby.

2d. If this cannot be furnished, in large cities at least, a wet-nurse should be procured.

3d. If, for causes which I have or have not enumerated, the mother cannot supply the nourishment, and a wet-nurse cannot be procured, an artificial diet must be furnished. I have notes at this moment of three infants born at the end of six and a half months, where an artificial food, from necessity, has to be provided. I have succeeded in saving these lives on an artificial food. Cream is the basis, and barley-water the menstruum, to which is added a little salt, a little sugar of milk, and a small amount of lime-water. I have no use for the large nursing bottle, provided with glass and rubber tubings and brushes. I regard the ordinary nursing bottle with all these appliances, particularly for a prematurely born child, as a fraud and a snare. Such children should be fed from an ordinary ounce bottle with a rubber mouthpiece."

Dr. Earle mentions favorably several artificial foods, and evidently prefers, in the case of manufactured foods, those which are based upon cow's milk or cream.

Regarding cow's milk as a food alone, he says: "It forms, however, very heavy and dense curds, and in this respect is frequently extremely difficult to digest in a weak and undeveloped stomach. It is also poor in fat, and, with the objection urged above — namely, the tendency to form a hard, firm curd —in many cases comes to be, when used as a baby food, the exciting cause of many diseases, and remotely the cause from which emaciation, marasmus and death ensue. There is no reason why, however, when we know the food the cow is fed upon, that she is in a clean stable, and care is taken with the milk, and it *agrees with the baby*, that it should not be selected."

Regarding peptonising powders for predigesting milk, Dr. Earle says: "Theoretically, this process should produce nearly the correct food; but practically, I find that it disagrees with a considerable number of babies. The greatest objection is that it is not practicable in the household, because it requires scientific skill to properly pre

digest the food, and many irregularities of digestion will certainly come from this preparation."

Dr. Earle mentions by name several infant foods which have proven useful in his experience, and concludes by saying: "I cannot designate particular foods, for reasons perfectly obvious. Every food has its advocates. Every food has its chemical analysis, which proves, without a shadow of doubt, that it is chemically and physiologically the only substitute for mother's milk, and yet every one of them sometimes fails us. I will admit that this is true of human milk in rare cases; but as a rule, let our advice be, in the order I mention: mother's milk, nurse's milk, mixed diet, cream foods, milk foods, malted foods, farinaceous foods, always pure and free from bacteria, and each preparation, whatever it may be, frequently inspected."

Among the artificial foods favorably mentioned by Dr. Earle is Carnrick's Food. We report his remarks regarding this food, because its formula so closely resembles that suggested by Dr. Atkinson in the following article; also that mentioned by the Special Committee on Dietetics in the report which we print in another column.

"I have carefully examined the process of manufacturing Carnrick's Food and believe that the greatest care is exercised in gathering the milk, and the attempt is made to insure absolute purity. The dairies from which this milk comes are under strict regulations, and as soon as the milk is received it is drawn into digestion tanks and brought to a temperature of 115 to 120°, and treated with freshly made extract of pig's pancreas. It is afterwards raised to a temperature of 210°, to entirely destroy any surplus pancreatic ferment, evaporated to the consistency of condensed milk, combined with dextrin and milk sugar; then evaporation continued and the product powdered and bolted.

This food is composed of forty-five per cent. of powdered milk, forty-five per cent. of dextrin and ten per cent. of milk sugar. It is partly pre-digested, so that the casein is as readily digested as it is in human milk. Dextrin is used in place of maltose for the following reasons: Dextrin is not fermentable until changed into sugar. The youngest infant can supply sufficient ferment to digest dextrin, and when the process of digestion is under way, abnormal fermentation is not likely to occur. The milk is only partially pre-digested because it is not advisable to entirely digest any food before ingesting. It has been claimed by Prof. Vaughan that preserved dry milk, if properly done, will keep for any length of time; and it is claimed that of the many hundred thousand cans of this food which have been placed upon the market during the past three years not more than a dozen of them have been returned in bad order. Finally, it is claimed for Carnrick's Food that it is the only artificial food which will thoroughly nourish a child without the addition of cow's milk; that it approaches nearer human milk in composition and digestibility, than any other artificial food that has been placed upon the marketup to this time. It is also claimed that it will agree with a larger number of children than any other artificial food.

Personally, the food has agreed with children in my practice and has certainly "bridged over" some who have not been able to take any other food. In my experience it is hardly rich enough, however, and fat in the shape of cream must be added."

### *THE INFANT FOOD PROBLEM.*

**Read by W. B. Atkinson, M.D., Member of the Committee of Dietetics of the American Medical Association.**

To the general practitioner everywhere, there comes constantly the question, what means shall be employed to prevent the terrible mortality among infants deprived of their natural food, the mother's breast-milk. As it is in very many instances impossible to place the child outside the walls of a large city, this want of proper hygienic surroundings acts as one great factor in the production of disease. But perhaps the most active cause of disease is the exhaustion of the vital powers from the want of those articles, which being properly and readily assimilated, aid to maintain the body in its highest and healthiest condition. We all know that, other things being equal, that child which has been able to keep its system in the best state, its blood rich

and pure, its muscles plump and firm, is sure to pass through an epidemic of children's affections either entirely unscathed or suffering only from a slight attack, readily throwing off the disease and never being troubled with the sequelæ.

Defective nutrition, then, is the predominant factor in the causation of the fearful mortality everywhere observed among children. We need only point to the statistics of children's hospitals, foundling asylums and similar institutions to show the truth of this proposition.

To us, as physicians and sanitarians, as citizens earnest for the welfare of this great republic, this comes with powerful import. An additional fact also appeals to us, when we learn that the vast majority of these are native-born offspring, while those who survive are largely the children of foreigners. This is shown by the valuable statistics of such investigators as W. Nathan Allen. Though we are compelled to admit that other causes, and one a very potent factor, produce the great disproportion between offspring of natives and foreigners, yet it must be admitted that the truth of our original proposition is still evident, that defective vitality causes a vast majority of deaths among infants, and even in children of larger growth.

The latter fact is constantly shown by the great mortality which prevails, when by reason of short crops or other causes, the people are unable to procure the food needed to maintain their systems at par, and thus resist the inroads of disease.

It goes without saying that the infant should be raised on its mother's milk whenever possible. When, for any cause, this fails, then comes the question, What shall be the substitute? Abroad, the milk of asses and goats is in quite common use. Cow's milk being that most easily obtained, is most largely employed in this country. This being the fact, we next come to the consideration as to how the two kinds of milk differ and what is needed in order to cause that of the cow most nearly to approach that of the human being?

Cow's milk contains more proteid matter, more fat, more mineral matter and less sugar, and as a rule in health, human milk is alkaline, while cow's milk is often slightly acid. One special difficulty with cow's milk is that its casein is more or less likely to form an insoluble mass by contact with the gastric juice, while the casein of human milk is in part a peptone and forms a very delicate coagulum when in contact with the gastric juice.

The object is always to produce a food for infants closely resembling in its composition mother's milk, and the nearer this is reached in all its details, the more surely will such food prove wholesome and valuable to the infant.

Our idea of a standard infant food, when produced would be as follows: Be sure to obtain the milk of a healthy cow. Just here we may premise that we do not believe in the common fallacy "one cow's milk." The mixture of the milk of several healthy cows is more likely to give an article of real value. Undoubtedly, many in this audience can substantiate the claim that it is most usually the pet cow, from which the milk is obtained which is put by for the sick baby, that receives all the banging, hurrying and pelting, and as we all know, is thus likely to yield a milk which may actually be poisonous in its nature. The best combination would be pure milk diluted with sufficient pure water to reduce the relative proportion of albumincids and mineral constituents most nearly to that of human milk, then partially peptonise or digest it, and finally, add a soluble carbo-hydrate with sufficient alkali to produce as close a resemblance to breast-milk as may be. We must not forget that peptonising milk does not relieve us of the need of being sure that the milk is at the outset pure and fresh.

The milk supply of large cities has now become one of the great problems of the day. Churned in the cars to the city, then more thoroughly churned in the wagons over wretchedly paved streets, distributed in many cases from doubtful cans by persons of much more doubtful appearance as to their own cleanliness; the flavor often aided by the puffing of a cigar or filthy pipe on the part of the distributor, the article is received in many cases in a receptacle of equal doubt as to cleanliness, it is

placed perhaps in a food chest, or so-called refrigerator, exposed to the atmospheric contact of other articles of food; is it to be wondered that the milk becomes of a very doubtful form as to its propriety as an infant aliment?

To a certain extent, these objections are met by the new plan of delivering what is called "whole milk." The milk, immediately after being drawn from the cow, is very carefully placed in glass jars. These being quite full are hermetically sealed so that there can be no opportunity of churning or adulteration or the absorption of odors or disease germs.

For children who have passed the age of infancy, I have long been in the habit of urging the employment, particularly during hot weather, of what is called "evaporated milk."

Its claims were that it was milk from healthy cows, well-fed, and being of a density greater than cream, churning or souring were less likely to occur during its transition to the city. Again, it was very much less ready to absorb or appropriate the odors, etc., to which it might be subjected. I have found this more easily born by the child, and repeatedly I have been compelled to substitute it for the "condensed milk," where a certain proportion of sugar is added in order to preserve the article.

For these reasons, Prof. Vaughan urges the use of dried milk solids, that is, they can be transported without injury from any distance, and if properly prepared may be kept without putrefaction occurring. Now, if such pure milk from perfectly healthy cows was partially predigested by the process of peptonisation with fresh pancreatine, the temperature then sufficiently raised to destroy the remaining ferment, reduced to a powder by evaporation, and to this, dextrine added, thus supplying the carbo-hydrate, we would then be as near the production of a proper food for infants as might be possible in the absence of the breast-milk.

By recent researches, we have been taught that dextrine is the best form of carbo-hydrate, as it is non-fermentable and does not irritate the stomach of the infant, is easily assimilated and, unlike cane sugar or maltose, is not likely to take on acid fermentation. Roasted wheat flour has long been employed and recommended as an article of food for infants, and particularly where diarrhœa is present. The reason of this is because this process converts the starch of the flour into dextrine.

The malt sugar or "Liebig Foods" are no doubt often valuable, particularly in infantile constipation, for their laxative effects; but are extremely liable to continue a diarrhœa or increase it. When these are used for their laxative effect, it is safer to use them alone rather than with milk, lest their fermentative tendency be aggravated by the presence of too great a quantity of albuminoid matter.

I am incited to this remark by the remembrance that the Liebig Foods do not by themselves meet the requirements demanded for infantile nutrition, unless with the addition of cow's milk. By an examination of the analyses of such mixtures, we find that they add no essential to cow's milk; nor do these foods act chemically upon the casein, nor physically, by reason of their solubility; and as I have before remarked, they may give rise to disorders of digestion, in consequence of the readiness with which they take on fermentation.

Farinaceous foods are of course out of the question, because of the absence of ptyalin in the secretion of the salivary glands in the earlier years of infancy. The addition of starchy matters to cow's milk, for the purpose of rendering the coagulum less dense and more easily broken up by the stomach, as has been recommended by some authorities, is wrong in principle; it really adds an indigestible element, which cannot fail to act as a foreign body, sure to produce fermentative acidity, diarrhœa and the usual train of evils.

The milk foods when diluted with water in accordance with directions, should correspond in nutritive value with human milk. Now that this correspondence should be more nearly perfect, they should also be partially predigested or peptonised, in order that the casein may be rendered more acceptable. It is also necessary that sugar in some form should be added.

In peptonising milk, it is of the greatest importance that the pancreatic

extract which is employed should be pure and fresh. The odor of some digestive ferments as furnished by the stores, is such as to give rise to the suspicion that they are already assuming the putrefactive tendency. In fact, it is a very difficult matter to preserve them, as it is well-known that the products of the pancreas are much more readily decomposed than any known animal substance. Hence the greatest care will be necessary that there shall not be the slightest possibility of the presence of putrefactive germs in any of these articles that may be employed to aid in the preparation of the diet of infants. The peptonising of milk, although apparently a very simple matter as practised in the laboratory, yet is scarcely feasible in the household.

Another point is of great importtance. Malt sugar is eminently prone to absorb moisture and hence it should not be combined with dried milk, and then put in bottles or other form of package for family use, because, as these packages are only partially used at one time, the balance is extremely liable to absorb moisture, resulting in fermentation; and this is more especially the case in hot weather or when kept in a hot room.

We cannot too strongly urge upon all who are compelled to prepare food for infants, the great, the imperative necessity of using only water that has been boiled. To the medical man, the reason is plain, yet it would not be amiss for him to explain in each instance why this should be done. Just here it is equally important to see that the water is not cooled by the addition of ice, as we may thus return at once to the water the very organisms which the boiling was intended to expel. I am impelled to this remark by the remembrance of an inspection just made for the State Board of Health of Pennsylvania. The subject of complaint was the ponds from which the ice was obtained to supply the demands of a large town. These ponds were filled with water from a stream, really nothing but a drain for a full graveyard, one or more slaughter-houses, a large number of cess-pools which were in constant use, and a large area of swamp land.

In diluting any form of infant food, we should give positive definite quantities. Undoubtedly all of us have encountered many cases where the child was really starving, while apparently receiving a large quantity of fluid. The fact is that the dilution had been carried too far.

It is unnecessary for me to occupy your time with further points as to times for feeding or of necessity for using bottles, etc., etc.

Before closing, I may remark that in my investigation of foods for the preparation of a paper which may be read elsewhere, I received from my friend Chief Medical Purveyor Baxter of the United States Army, a tabulated analysis of some fifteen forms of foods. Of these, only four contained more than ten per cent. of nutritive material, thus showing that even here we are likely to be deceived, and to be employing an article as useless for its proposed purpose as the too largely diluted food of the infant already mentioned.

In conclusion, permit me to say that it has long been my custom not only in my practice, but also in my teachings, to urge the giving of less medicine, using it only when imperatively demanded, and to insist upon the value of proper hygiene and proper nourishment, believing that these alone in many cases will at once place the child on the road to health, and if persevered in, will, as a rule, maintain it there.

DISCUSSION.

The discussion was led by Dr. W. S. Christopher, of Cincinnati. He found condensed milk a valuable food for children. With cream mixtures his experience has not been satisfactory. He used at the Home for Foundlings, cow's milk diluted with lime water for children who were comparatively healthy. Several years ago he tried peptonising milk, but it was a total failure and he was obliged to stop it in order to save the life of the child. He did stop it and the child lived. In consequence of this, peptonised milk grew in great disfavor with him. There can be no doubt whatever but that pancreatic extracts are likely to undergo putrefaction, that they are things extremely proper for putrefaction, and it is consequently a fact on the face of this, that they are

improper food for infants. He stated that he could not agree with Dr. Atkinson in his statement that dextrine could not ferment.

Dr. Christopher expressed his opinion that to properly nourish a child at different times and under different conditions it would be proper to study the condition of the stools and its general condition, and then adopt a food whose composition was indicated as proper nourishment at such times. For instance, if we have a stool of a putrid character, we must refrain from albuminoid substances and when we find the stool sour, we may be sure that acid fermentation is the cause. He said dextrine was preferable to starch as an addition to milk, because it is in the intermediate state between starch and glucose.

Further discussion of this paper was conducted by Dr. I. N. Love, Dr. Jones and Dr. Larrabee, all of which was very interesting, and which we shall be obliged to defer publishing until another issue.

## LONDON LETTER.

SIR WILLIAM GROVE, who has been for sixteen years a judge of what used to be called the Court of Common Pleas, was, before he practised at the bar, a professor of physics, and earned a great reputation by his work on *The Correlation of Physical Forces*, written when the doctrine was yet in embryo. He has lately given a "Friday-night discourse" at the Royal Institution, on *War in Nature*, in which he developed the principle of "Antagonism" as complementary to his previous doctrine of correlation. Antagonism, he urged, was not the baneful thing which it was commonly deemed to be; but a necessity of existence, and of the organization of the universe, and producing as much good as evil. Without it, life would be impossible; and it was inevitably associated with unorganized matter, no less than with organized matter and with sentient beings. This universality of antagonism had not, he thought, received sufficient attention; too great stress having been laid on the element of force, and too little on that of resistance. He contended that the condition of antagonism was as essential to Ormuzd as to Ahriman. He illustrated his point by references to astronomical phenomena, to certain photographic experiments, and to vegetable and animal life. All persons who are concerned with the attainment or preservation of health in youth and adult age have become aware that it is only to be had by learning endurance and cultivating the powers of resistance to external forces. But though Sir William Grove had nothing very novel to say about the struggle for existence, and of the good results to mind and body of having to work for one's living, it was interesting to see these familiar doctrines treated by the veteran physicist as part of a great natural law pervading the whole universe. Dr. Samuel Johnson, who liked occasionally "something craggy to break his mind against," would perhaps have afforded some additional observations to Sir William Grove, who, towards the conclusion of his address, which was listened to by a select and appreciative audience, found a fresh instance of his law of antagonism in the internal mechanism of organized beings. He referred especially to the internal struggles of the heart and arterial coatings; of the forces at work in breathing; and to the battle in the blood, between the white corpuscles and the bacteria, so well described by Metschnikoff.

### THE LINNEAN SOCIETY.

The centenary of the Linnean Society will be celebrated on May 24. A eulogy of Linnæus will be pronounced by Professor Fries, who is the present occupant of the chair of botany in the University of Upsala. Three other eulogies will also be delivered: on Robert Brown, by Sir Joseph Hooker; on Charles Darwin, by Professor Flower; and on George Bentham (joint author of the *Genera Plantarum*), by Professor Thiselton Dyer. The Society has also instituted an annual gold medal, to be presented to a distinguished botanist and zoologist on alternate years. Two medals will be presented at the centenary festival: one in botany, to Sir Joseph Hooker, well known for his expeditions in the Himalayas, and as

director for many years of the National Botanical Gardens at Kew; the other, in zoology, to Sir Richard Owen, the palæontologist, long the superintendent of the natural history department of the British museum.

### DE CHAUMONT.

Dr. De Chaumont, who died on April 18, had been, for the last year or two, almost withdrawn from active life, although he had continued to discharge the duties of his chair of Military Hygiene in the Army Medical School at Nettey. He was a man of remarkable intellectual powers and great erudition, and was looked up to with a peculiar reverence and affection by all who were engaged in hygienic work or the public sanitary service. He never, however, attained, with the medical profession at large, the reputation which he really deserved. His sphere was comparatively small, and he was never appreciated at anything approaching his right value by the crowd of dunderheads who draw large salaries for doing nothing (or worse) in expensive offices in the most fashionable part of London—a collection of civilian nonentities who collectively form the "War Office," so-called.

### OVER-POPULATION OF THE TOWNS.

The rapid increase of the population accumulated in towns in this country, and the alleged growth of the class of unskilled laborers in towns engaged in trades which barely afford a livelihood, even when work is plentiful, has been engaging a good deal of attention lately; Prof. Huxley, and many other distinguished writers have taken part in the discussion without, however, contributing any solution. A "Committee for inquiry with the subject of over-population," has been formed, and will hold conference for the discussion of the subject on Mondays during May and June. Recent investigations have shown that there is a very much larger pauper immigration into this country than was generally supposed, and it is highly probable that some legislation to check this, similar to that already enforced in the United States, will be required. It would seem that a very large number of foreigners, chiefly, it is said, Polish Jews, have been coming over for many years past, and have gone into the tailoring and boot-making trades, with the result of very greatly depreciating wages. A select Committee of the House of Lords is at present taking evidence with regard to the "Sweating" system in the tailoring trade, and has elicited facts of a most harrowing nature; the House of Commons has also appointed a Select Committee on emigration and immigration, which has held several sittings.

### LOOSE BODIES IN JOINTS.

An interesting discussion as to the mode of origin of loose bodies in joints has recently taken place. The subject was practically raised by Professor Humphry, of Cambridge, who made some remarks on a case shown to the Medical Society, and subsequently wrote a letter to the leading medical journal, more fully expressing his scepticism with regard to the possibility of the formation of loose bodies by the detachment of portions of the articular cartilage. The result of the discussion which has ensued seems to have been to prove that a loose cartilage may be thus produced, either by the breaking off of a piece of articular cartilage with or without bone, by a sudden wrench, or by the detachment of a fragment by a process of quiet necrosis. A third way by which a loose cartilage may be produced is that which Prof. Humphry was disposed to regard as the invariable one; tufts or processes of synovial membrane, which may assume various forms, grow into the joint; as they naturally contain cartilage cells, they may become the seat of cartilage and of ossification of cartilage, they may become pendulous as they grow larger, and finally, by rupture of the pedicle they may become loose in the joint. This is Professor Humphry's theory, and it is ingenious, if a little far-fetched; doubtless the majority of the unorganized or fibrous loose bodies are thus formed.

### SPLENECTOMY.

Sir Spencer Wells has reported a successful case of splenectomy for wandering spleen; the patient was an

unmarried woman aged 24. In his remarks on the case, when reporting it to the Royal Medical and Chirurgical Society, he gave a table prepared by Prof. Adelmann, of all the cases reported up to June, 1887; he had collected nine cases in which the operation was performed for wandering spleen, with only two deaths; but the general mortality of the operation, for all causes, as shown by the table, was 71 per cent. Thus it has been done nineteen times for hypertrophy with leukæmia, with only one recovery; fourteen times for "simple hypertrophy," also with only one recovery; and four times for malarial hypertrophy, again with only one recovery. Sir Spencer Wells however thought that, as the results had gone on improving during the last thirty years, we might hope, as experience as to the selection of cases and the mode of operating increased, that better results might be obtained, and pointed out that the general mortality of ovariotomy thirty years ago was about 60 per cent. As to the comparatively favorable results of removing wandering spleen, Mr. Meredith and Mr. Howard thought that while the unnatural mobility increased the sufferings of the patient, it diminished the danger of the operation, probably because the pedicle was larger; and the latter surgeon suggested that there was consequently less disturbance of the sympathetic plexuses, and easier manipulation. Cystic spleen also showed well in the table, four cases with only one death having been reported. There was a general accord that a moderate amount of leukæmia (or leucocytosis) need not prohibit the operation in a case otherwise suitable.

### FAILURE OF ELECTROLYSIS IN UTERINE FIBROIDS.

Two cases of fibroid tumor of the uterus, in which after failure of the electrolytic method of treatment, hysterectomy had been successfully performed, were recently reported to the Gynecological Society. Mr. Reeves, who had performed the operation in one of the cases, while expressing the opinion that the electrolytic treatment, when unsuccessful, might lead to loss of valuable time, added that since hysterectomy was a very dangerous operation, electrolysis ought to have a fair trial.

### MERCURY HYPODERMICALLY.

There is generally a good deal of delay in the adoption, and even in the testing, of therapeutic novelties in this country. It is only now that we have a report of anything like a systematic attempt to test the clinical value of the intra-muscular injection of mercury in the treatment of syphilis. Mr. Astley Bloxam, surgeon to the Lock Hospital, having used the method, both at the hospital and in private, has become an ardent believer in its efficacy. He uses a solution of sal-alembroth, containing two grains in the dram, as he had found that the preparation of calomel in glycerine (1 in 10), and calomel in vaseline (1 in 5), recommended by Lewin and by Sigmund, caused much pain, and sometimes gave rise to troublesome abscesses. Mr. Bloxam injects ten minims of the sal-alembroth solution (gr. $\frac{1}{3}$) deeply into the muscular substance of the buttocks once a week. The primary sore, he said, had generally healed by the second injection, and the secondary symptoms soon after cleared up; affections of the throat and glands remained, but it was only necessary to give the injection once a fortnight, and later once a month, the treatment being continued altogether for about a year or eighteen months. The pain following the injections was not severe, and there was very little induration unless bleeding took place. Mr. Bloxam spoke in high terms of the success of his method; but the weekly injection of a soluble salt like sal-alembroth appears to present some differences from the injection of a very slowly dissolvable salt, such as calomel, and some disadvantages when compared with it.

### NOCTURNAL GLOBUS.

Dr. George Johnson, F.R.S., describes a form of *globus hystericus* occurring at night. At some time during the night, generally on first falling asleep, the patient is awakened by a fearful sense of suffocation. To obtain relief, the patient will get up and rush to an open window. He says that an opiate given for a few nights is very efficacious against this distressing symptom.

He mentions pil. saponis co., gr. v, (= opium, gr. j.) as a form which he prefers. The disorder is very often observed in men.

### MINT AN ANÆSTHETIC.

Peppermint water, the last new antiseptic, is said to be, like carbolic acid itself, a useful agent for producing anæsthesia, or, at any rate, diminishing hyper- or dys-æsthesia of the unbroken skin. Dr. Armand Routh reports very favorably on its use in pruritus pudendi, especially in the neurosal form observed frequently during pregnancy, or at the climacteric. He orders a teaspoonful of borax and five drops of ol. menth. pip. to be put into a pint bottle of hot water, and well shaken; the parts affected to be freely bathed with a soft sponge. The soothing effect often lasts for many hours.

### NEW METHOD OF OBTAINING VACCINE.

Dr. W. C. Grigg states that he has vaccinated nearly three thousand infants, with only one complete failure, with lymph obtained in the following manner: A small bead of pure glycerine is dropped on the centre of each pock, and the top of the vesicle is gently rubbed with a smooth blunt instrument (*e.g.*, the round glass head of a shawl-pin). In two or three minutes the drop will have increased to double its size, if the vesicle contained a good supply of lymph, and may be used for vaccinating in the ordinary way.

### STRYCHNINE TO PREVENT POST PARTUM HEMORRHAGE.

In cases in which post-partum hemorrhage has occurred after previous pregnancies, several practitioners have recently strongly recommended the administration of liquor strychniæ, B. P., ♏ iv or v, twice or thrice a day for a month or six weeks before the expected date of the confinement. (Liquor strychniæ is termed liquor strychniæ hydrochloratis in the new edition of the *British Pharmacopœia*, and its strength is there given as 1 in 100.)

### SALINES IN TYPHLITIS.

Dr. Suckling, of Birmingham, advocates the use of saline purgatives in moderate doses, with plenty of water, in peritonitis associated with typhlitis due to fæcal retention. He has related the case of a young man, aged 21, admitted into the infirmary with peritonitis of three days' standing. The routine treatment with opium and belladonna was first tried; but as the vomiting and pain continued, half-drachm doses of sulphate of magnesium and sulphate of sodium, with ten minims of tincture of belladonna, were administered every four hours. The only food allowed was peptonized milk and beef-tea. The patient quickly began to improve, and after the treatment had been continued for about a week he was "apparently quite well and free from fever." He eventually made a good recovery.

The crematorium at Woking, the great cemetery near London, has been very much made use of lately; no less than eleven cremations having been performed within the last three months. And it is proposed to complete the building by the erection of a chapel, waiting-rooms and a lodge.

Dr. Thomas Keith, extra-surgeon for the treatment of ovarian diseases to the Royal Infirmary, Edinburgh, has given up his appointment there, and has settled in London. He is accompanied by his son, Mr. Skene Keith.

It is stated that the law courts will again be called upon to adjudicate upon a surgical quarrel; a difference having arisen between Mr. C. E. Jennings, until recently assistant-surgeon to the Cancer Hospital, and some of his former colleagues.

The Marshall Hall prize, founded to perpetuate the memory of Dr. Marshall Hall, one of the founders of modern neuro-pathology, has been awarded to Dr. W. H. Gaskell, F.R.S., lecturer on advanced physiology in the University of Cambridge. Dr. Gaskell has earned this honor by his important writings and original researches on the sympathetic nervous system.

DAWSON WILLIAMS, M.D.

---

THE conditions formulated by the Committee on Infant Foods are approximated more nearly by Carnrick's Food than by any other with which we are familiar. We refer the reader to the description of its manufacture in the abstract of Dr. Earle's paper on page 537.

## REVIEWS AND BOOK NOTICES.

ATLAS OF VENEREAL AND SKIN DISEASES, WITH ORIGINAL TEXT BY PRINCE A. MORROW, A.M., M.D. New York: William Wood & Co.

The illustrations are from the works of Kaposi, Hutchinson, Neumann, Fournier and Hardy, Ricord, Cullerier, Besnier, Vidal, Leloir, Morrow, Keyes, Otis, Hyde, Piffard and others. The first fasciculus contains five plates, showing varieties of chancroid in both sexes; the second takes up in addition primary syphilis; the third and fourth deal with the syphilides.

The plates are well executed, the drawing clear and distinct, and the coloring vivid and yet natural.

The work is issued in fifteen monthly parts, at $2.00 per part. It is sold only by subscription.

Twenty pages of text accompany each part, consisting of a description of the plates, and of a practical treatise on venereal and skin diseases. The typography is excellent. For a work of this class the price is very small indeed; and the enterprising publishers deserve the cordial support of the profession for their liberality.

If any of our readers desire to examine these beautiful plates, they can be seen at the office of this journal.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM. By W. R. GOWERS, M.D., F.R.C.P., etc. American Edition. Published by P. Blakiston, Son & Co. 8vo, pp. 1357. Price, $6.50.

The bulk of the volume before us may give some idea of the importance which neurology has assumed of late. The book is praiseworthy as to typography, and the three hundred and forty-one illustrations are mounted on paper which does them justice.

The work is essentially practical; "hypothesis being employed only where it is indispensable for the proper grasp of facts." In his classification he acknowledges the objections which lie against any and every system, and groups the affections under the heads of coarse organic, structural, nutritive and functional.

Speaking of the treatment of sciatica, he advocates rest, salines in gouty cases, and treatment of the cause. In acute cases he applies hot linseed-meal poultices along the course of the nerve, and gives small doses of mercury. Counter-irritation cannot be used too early, and may cut short the attack if applied over the seat of pain, and following it up as it changes its location. Spontaneous pain is only relieved by sedatives, of which morphine is the surest, but cocaine (injected at the seat of pain) often relieves as effectually. Acupuncture gives but temporary relief. The most useful sedative liniment is one of belladonna, chloroform, and aconite. Electricity is useful in the later stages. In very obstinate cases, nerve-stretching has done good, chiefly by counter-irritation and by enforcing rest. No mention is made of the use of theine.

In locomotor ataxy he prefers arsenic to all other drugs. To relieve pain he uses morphine, cannabis, and sometimes cocaine. The only external application recommended is chloroform, sprinkled upon spongiopiline. Langenbach's remarkable case is noted, in which the sciatic nerve was stretched; unaccountable improvement in both the pains and the tabetic symptoms following; and also the subsequent unsatisfactory history of this procedure. Throughout, the work is thoroughly well done; the descriptions clear, the directions for treatment sensible. We commend the book to our readers.

## LETTERS TO THE EDITOR.

### DIAGNOSIS AND TREATMENT WANTED.

Editor MEDICAL TIMES:

Mrs. R., aged 21 years, married eight months. Complains since Christmas of pain at the articulation of the jaw. This pain has been present constantly for five months. Her appetite is good, bowels constipated, pulse normal. She also has pain in the back, between the shoulders, which is not increased by pressure. Has a bad taste in the mouth in the morning. She has been treated for the pain in the jaw, without benefit She is unable to open the mouth widely, or to chew hard bread. There seems

to be a lack of power of the masticatory muscles. G. W. C.

[The pain is probably due to a diseased tooth; the other symptoms to constipation. Examine the teeth and report.—ED.]

Editor MEDICAL TIMES:

I noticed an article in the MEDICAL TIMES, published by you, on "Epilepsy Due to Ear Disorder." I have a patient four years old suffering with this disease. He has an attack every other day, but they are of short duration, lasting but a few seconds. He was first taken with a violent cold, which settled upon his lungs; this is now relieved, but the epilepsy continues. His general health is as good as ever. Please let me know what would be your treatment in such a case. H. C. B.

[We would give full doses of quinine suspecting malaria; especially as children often have convulsions where adults would have chills.—W.].

## MISCELLANY.

SUGGESTED MEDICAL RECIPROCITY WITH THE UNITED STATES.—In the House of Commons, last week, Mr. A. Morley asked the Vice-President of the Committee of Council whether registered medical practitioners in the United Kingdom were afforded privileges of practising in the United States of America; and whether any steps had been taken, or were in contemplation, by the Privy Council, under Section 17 of the Medical Act, 1886, in the direction of similar privileges being given to the legally qualified American practitioners who might be desirous of practising medicine in the United Kingdom. In reply the Vice-President of the Council said that no statement has been received by the Privy Council from the Government of the United States showing the privileges afforded to registered medical practitioners of the United Kingdom to practice in America, nor has request been made by that Government for the application of Part II of the Medical Act, 1886, to America. If America "means business," it ought to adopt a law which would authorize the branding of medical qualifications with the Government stamp of sufficiency, and then Britain would be only too glad to accept perfect reciprocity. The difficulty about a reciprocal recognition of medical qualifications between this country and the States is that there does not exist in America any such thing as an official guarantee of the quality of a license such as is here provided by the Medical Register. In America each province recognizes what it pleases, and very often the things which are called qualificatins to practice are of so low a grade that they could never receive the *imprimatur* of the British Government or be admitted to any rights of practice at this side of the Atlantic. The Medical Council, under the recent Act, has power to admit foreign or colonial qualifications to registration, but only if those qualifications represent, at least approximately, the same standard of education as is guaranteed by the British licensing bodies; therefore its choice of American degrees for recognition is greatly limited.—*Med. Press and Circular.*

Prof. Jas. H. Stebbins, Jr., read a paper before the "American Chemical Society," March 2, 1888, "On the Relative Values of a few Pepsin Tests," in which the ordinary mode of testing pepsins is criticized because of its not being based on the peptonizing power of pepsin as distinguished from the dissolving action of both the pepsin and added hydrochloric acid. As the "Kremel test" measures only the peptonizing action of pepsins, exclusive of all intermediate products, the professor strongly urges its adoption, and appends the quantitative results he obtained by this method—arranging the pepsins in the order of their peptonizing power, the most powerful standing first and the weakest last, as follows:

| | |
|---|---|
| "Ford's, | Finzelberg's (Saccharated?), |
| Golden Scale, | Hawley's Saccharated, |
| Boudault's, | Merck's Plain Soluble, |
| Jensen's Crystal, | " Pure Scales, |
| Scheffer's Saechar'ted, | " Lamatsch, Pure, |
| Fairchild's, | Kidder's French." |

Jaccoud prefers salicylic acid to reduce the fever of consumption. He gives thirty grains daily for three days, twenty-three grains daily for three more, then stops for two days, and resumes as before. If the fever falls, fifteen grains are then given daily.

THE newcomer in the field of medical journalism announced in our last issue is *The University Medical Magazine.* The editorship will be in the hands of George E. de Schweinitz and Hobart A. Hare, aided by an advisory committee from the University staff. With the influence of this great institution of learning at its back, the wealth of clinical material from which it can draw, and the capable management of Dr. A. L. Hummel as publisher, the new journal certainly starts with fair auspices. We wish it success.

Dr. Oltramere records a very remarkable case of spontaneous gangrene in the external genitals of a man addicted to the immoderate use of alcohol, without any other apparent cause, which ended favorably under the local use of iodoform ointment. The prognosis in the case is not so grave as the extensive loss of tissue would lead one to expect, where there is no complication. —*Revue Medicale de la Suisse Romanc.*

THE firm of A. A. Marks issues a treatise upon artificial limbs, etc., which contains much information of value to physicians. The experiences of this firm, which has sent out over 8,500 artificial limbs, is given as to the amputations which favor the fitting of such limbs. The book makes a volume of 397 octavo pages, profusely illustrated. With it is sent a chart containing directions for measuring and ordering these limbs, etc.

NOTES FROM THE BALTIMORE CLINICS. —In a case of diabetes mellitus which had resisted opium, codeine, strict diet and other measures, rapid improvement was produced by one-twenty-fourth of a grain of bromide of arsenic three times a day, prescribed by Rohè.

Rohé treats internal hemorrhoids with fluid extract of hamamelis and glycerine; half a drachm of each every four hours. The remedy is promptly effectual in uncomplicated cases.

At Bay View Hospital, Rohé uses solution of bichloride of mercury 1:2000 to 1:1000 for chancroids. Pledgets of absorbent cotton are moistened with the solution and kept in constant contact with the ulcers. The effects are striking. Suppuration is promptly arrested and cicatrisation rapidly follows.

PNEUMONIA IN CHILDREN.—Child of 22 months; admitted May 1; has had persistent cough; temperature ranging from 100.° to 103°; dulness, but not very marked, at base of right lung; mucous râles at same spot. Diagnosis, catarrhal pneumonia. Dr. Stryker said that this case illustrated the fact that very young children rarely have the symptoms of pneumonia so well marked as they are in adults. Instead of complete dulness at the affected spot, there is merely a modified dulness, and auscultation shows that some air is entering the vesicles at this point.

Before being admitted the child had suffered from bronchitis. This has extended to the air cells, and now the child has both bronchitis and pneumonia. As for treatment, generally the simpler the better.

You might try a mild mustard plaster, but do not leave it on until there is any positive irritation. Turpentine stupes are also good.

He is not in favor of poultices on account of their sogginess, and the sudden changes of temperature to which the child is subjected through the changing of the poultices. He prefers a thick packet of cotton around the chest.

The treatment given was a mixture of mistura glycyrrhizæ comp., ammonii chloridum, syr. senegæ, and syr. ipecac.

A little paregoric was added to a dose when thought necessary, on account of the cough.

*CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING MAY 12, 1888.*

PASSED ASSISTANT SURGEON A. G. CABELL, detached from "Adams," proceed home and wait orders.

SURGEON M. H. SIMONS detached from Naval Academy and to practise-ship "Constellation."

MEDICAL DIRECTOR P. J. HORWITZ, leave of absence for six months to leave the United States.

A Naval Medical Examining Board is now in session at the Naval Hospital, Philadelphia, for the examination of candidates for admission to the Medical Corps of the Navy. There are 11 vacancies in the list of Assistant Surgeons. Permit for examination can be obtained on application to the Secretary of the Navy.

## THE DYNAMOGRAPH.

AN INVENTION WHICH IS THE ONLY RIVAL OF THE TELEGRAPH AND THE TELEPHONE.

After eight years of patient, unremitting labor, eight years of hope and disappointment, James F. McLaughlin, a young electrician of Philadelphia, has succeeded in perfecting a machine which promises to be the most formidable rival that has yet arisen against the Bell Telephone Company, as well as against the entire system of modern telegraphy.

Not long after the invention of the mechanical type-writer, Mr. McLaughlin became convinced that its efficiency could be increased by the application of an electrical current, so that as the writing was made upon one machine, the same writing would be instantly duplicated upor another similar machine at any distance separated from the first.

It would be telling the old story of the trials of every inventor to go over in detail the history of McLaughlin's persistent plodding; suffice to say that with indomitable perseverance he stuck to his self-appointed task until his thoughts became crystallized into crude mechanical shape. With this and an exposition of his projected plans, he succeeded in interesting capitalists in the enterprise. Having now the necessary means to carry on his experiments, the progress was rapid, and as the machine grew apace, patents of a broad nature were applied for and granted, for it was fully realized that the time for an electro-mechanical type-writer had come, and these business men foreseeing the immense future open for a successful instrument took every pains to make it perfect, and gain possession of basis patents with indubitable claims of priority and fundamental purport. At last the machine was finished and the patents granted, and now the question before these men is that of the successful introduction of the machine, that is seen to be wanted, into the business of the world.

In appearance the instrument is of the ordinary mechanical type-writer form, is similarly worked from a key-board, is operated either mechanically or electrically, and prints on any sized paper. It has one advantage that will immediately impress every one familiar with the existent type-writers, which is that the traveling carriage is *automatically* moved *backward* as well as actuated forward, thus abrogating the annoyance and loss of time in pushing the roller back at the end of each line. As a mechanical type-writer it will compare with any now before the public, and its ease of action together with its reversing mechanism, make it especially valuable. But coincident with these mechanical functions it has, by the mere movement of a switch, the increased efficiency of printing the message upon another machine separated by any distance from the first, so that the person sending the message, and the one receiving it, have each a copy, precisely alike in every respect. Thus the machine is at once a rival to the Type-writer, the Telephone, and the Telegraph, with great advantages over each of these instruments, and its place is that of the most subservient of servants to the use of man. The Telegraph can only be worked by a skilled operator; while the Dynamograph can be used by a child. The Telephone keeps no record of its service; while the Dynamograph *prints* the message simultaneously at both ends of a line, and prevents all controversy. The existent Type-writer can only be used as a type-writer, while the Dynamograph is at once a Type-writer, a Telephone, and a Telegraph. Thus there is no doubt that this latest invention of this fertile age of invention is the greatest of all; and strange to say, it seems to be the last development to be made, for as the Telegraph is a system of sound, and practically owned by a monopoly, the Telephone a system of speech, and also owned by a monopoly, there is no other way in which to transmit intelligence than by a system of printing, such as exploited by the Dynamograph, and this company with its patents has covered that whole field for their benefit.

The men interested in the Dynamograph are of a national reputation and give it a business position compatible with its own merits. The Hon. John Russell Young, ex-U. S. Minister to China, is the President of the Company, and Hon. W. W. Ker, ex-Assistant Attorney-General of the U. S., is the Attorney.

The office of the Company is at 140 South 4th Street, Philadelphia, Pennsylvania, U. S.

[This instrument appears to be so peculiarly fitted for the physician's needs, that we have obtained the above description from the owners to place before our readers. The advantages over the telephone are that the message may be sent at any time, even if there is no one present to receive it; and when the physician returns to inspect his instrument, he will find there all messages sent in his absence. Furthermore, by an ingenious arrangement, no other person using the line can read the message except the one for whom it is intended.—Ed. P. M. T.]